

The Paradigmatic Landscape of Emergency Management: A Conceptual Analysis

Jakub Marcinkowski

Wrocław University of Economics and Business

e-mail: jakub.marcinkowski@ue.wroc.pl

ORCID: [0000-0002-6076-1552](https://orcid.org/0000-0002-6076-1552)

© Jakub Marcinkowski

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/>

Quote as: Marcinkowski, J. (2026). The Paradigmatic Landscape of Emergency Management: A Conceptual Analysis. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 70(1), 36-46.

DOI: [10.15611/pn.2026.1.04](https://doi.org/10.15611/pn.2026.1.04)

JEL: B49, H12, Q54

Abstract

Aim: To systematise paradigmatic discourse and foster paradigmatic self-awareness within the management sciences, with a particular focus on emergency management.

Methodology: A deductive approach was applied, based on a literature review, to classify and analyse existing research within the field of emergency management.

Results: The study demonstrates that emergency management is characterised by paradigmatic tension, multiparadigmaticity, and increasing transparadigmaticity. It also reveals that researchers often lack explicit paradigmatic awareness, which constrains methodological coherence and limits theoretical advancement.

Implications and recommendations: The article highlights the need for clearer articulation of philosophical assumptions, expanded training in research philosophy, and the wider adoption of mixed-method approaches. Future research should explore alternative paradigmatic classifications and empirically assess how paradigmatic orientations shape research outcomes.

Originality/value: This article provides one of the first comprehensive applications of social science paradigms to emergency management, reinforcing its development as a distinct subdiscipline within the management sciences.

Keywords: emergency management, social sciences paradigms, management sciences paradigms, paradigmatic self-awareness

1. Introduction

A distinctive shift in methodological reflection emerged with the introduction of the concept of the paradigm by Kuhn (1970). Through his theory of the paradigmatic nature of science, Kuhn sparked an ongoing debate on the psychosocial dimensions of scientific inquiry, even though he was not the first to highlight this aspect.

Although research on emergency management has made substantial progress in addressing practical challenges, it frequently lacks explicit engagement with the philosophical assumptions underlying its methodological choices and interpretations. This “paradigmatic unconsciousness,” a notion related to Czetwertyński’s (2019) concept of “unreflective existence within a given system,” may lead researchers to adopt dominant paradigms implicitly, without critically assessing their suitability for the complex and multifaceted nature of emergencies. A lack of paradigmatic self-awareness—understood as the conscious recognition and justification of one’s ontological, epistemological, and methodological assumptions—can result in methodological inconsistencies, biased interpretations, and constraints on developing innovative approaches. This issue is particularly relevant in emergency management, a field that, as noted by Drabek and Hoetmer (1991), relies on applying scientific knowledge, technological innovations, and management processes to address extreme events. The urgency and practical demands of emergency management may inadvertently prioritise immediate solutions over deeper methodological reflection, thereby limiting the effectiveness and adaptability of research findings across diverse contexts. This article addresses the research gap by systematising paradigmatic discourse and fostering paradigmatic self-awareness within emergency management.

Emergency management is regarded as both a scientific discipline (or subdiscipline) and a profession. It involves the application of scientific findings, technological solutions, and management processes to respond to extreme events that often result in human suffering, material losses, and significant disruptions to community life (Drabek & Hoetmer, 1991). The field has recently attracted increased academic and public attention, accompanied by growing expectations regarding improved coordination before, during, and after emergencies (Kapucu et al., 2010). While existing research addresses these practical concerns, there remains a noticeable gap in methodological reflection on the fundamental principles guiding emergency management research. Ongoing discussions on paradigm shifts in the field tend to focus on theoretical or empirical developments rather than methodological ones. Research in emergency management typically revolves around forecasting and detecting hazards (eg. Mukhopadhyay et al., 2022), stakeholder collaboration (e.g. Lo et al., 2017), people-centred approaches (e.g. Leneman et al., 2021), or critique of command-and-control systems (e.g. Imperiale & Vanclay, 2019).

Developing paradigmatic self-awareness in emergency management research requires a thorough examination of the philosophical assumptions and methodological choices underpinning existing studies. Evidence suggests a widespread lack of explicit paradigm awareness, as researchers often operate within specific paradigmatic frameworks without acknowledging their theoretical foundations (Gioia & Pitre, 1990). Such unreflective adherence to paradigms leads to methodological inconsistency, limits theoretical development, and poses challenges for practical application. These issues can significantly impede theoretical advancement and effective implementation in emergency management practice.

The author applied a deductive approach based on a literature review to categorise and evaluate existing research in emergency management. The article is structured as follows: first, the paradigmatic nature of the social sciences is introduced to provide a conceptual background. Next, a diagnosis of four paradigms within management sciences is presented along with their relevance to emergency management. The article concludes with a discussion summarising the implications of the analysis.

2. Paradigmatic Nature of Social Sciences

The psychosocial character of science, shaped by social and cultural contexts and constrained by the limits of human rationality, inherently assumes that scientific knowledge is practised by individuals. This perspective underlines the significance of valuation, which constitutes an intrinsic element of management sciences. A paradigm is commonly understood as a recognised standard of scientific practice, encompassing theories, laws, applications, and research tools (Kuhn, 1970). In a similar vein, Sudoł (2014) defined a paradigm as a “key scientific theorem (belief), established through scientific methods and shared by an entire community of scholars, or at least by a substantial part of it, which forms the foundation for developing more detailed scientific theorems. It sets the directions for scientific thinking and research (models, criteria, and procedures).”

However, within scientific discourse—particularly in social sciences—the concept of a paradigm remains difficult to delineate clearly, which directly affects researchers’ self-awareness and openness toward alternative paradigmatic positions (Czetwertyński, 2019). This cognitive voluntarism, inherent to the paradigm concept, is especially visible in management sciences. Despite definitional ambiguities, the paradigm broadly refers to the shared beliefs and assumptions of a community of researchers (Kuhn, 1970). The multiplicity of definitions, as noted by Sudoł (2014), leads scholars to adopt various interpretative lenses (Jankowski, 2016). Blaug (1992) emphasised that the essence of Kuhn’s contribution lies not in defining the term ‘paradigm’, but in articulating the concept of scientific revolutions. Among the definitions reflecting this perspective are those referring to widely recognised scientific achievements, sets of shared beliefs, scientific traditions, accepted legal decisions in science, problem-solving tools, general epistemological viewpoints, and frameworks delineating what constitutes scientific reality. Collectively, these definitions describe the fundamental ‘rules of the scientific game’.

Such use of the paradigm concept is closely linked to Kuhn’s (1970) proposition that science develops through revolutions, as argued by Niemczyk (2020), social sciences are “closer to an evolutionary model—gradually verifying and improving existing knowledge, introducing incremental solutions, and maintaining a sceptical stance toward new concepts.” He further noted that the approaches of Kuhn, Lakatos, and Popper do not challenge the sensibility or rationality of scientific knowledge. Nevertheless, this does not negate the relevance of Kuhn’s notion of scientific revolutions, which conceptualises scientific development in four stages: pre-paradigmatic inquiry, paradigmatic (normal) science, crisis, and scientific revolution (Chalmers, 1976; Czetwertyński, 2019; Kuhn, 1970).

Within this debate, Sułkowski (2005) stated that management sciences remain in a pre-paradigmatic phase, suggesting that the field is still in a pre-scientific stage. According to Sudoł (2014), scholars in the discipline “should undertake the effort to generate their paradigms.” In contrast, Hardy and Clegg (1997) found that management science had already entered a post-paradigmatic stage. Another viewpoint, represented by Hatch (1997), raised the question of whether management sciences operate under a single dominant paradigm (monoparadigmaticity), whereas Sudoł (2014) highlighted their multiparadigmatic nature.

As these divergent positions illustrate, the discourse on the role and significance of paradigms in management sciences remains ongoing, dynamic, and intellectually stimulating, however far from resolved.

3. Four Paradigms within Emergency Management

Sułkowski (2020) attempted to synthesise management paradigms from the perspective of the structure of scientific theory, grounding his approach in philosophical reflections on earlier proposals and adopting a strictly epistemological lens. He distinguished four paradigms: the neopositivist-functionalist-systemic paradigm (combining theoretical objectivism with regulation), the interpretative-symbolic paradigm

(combining theoretical subjectivism with regulation), the radical structuralist paradigm (derived from critical theory and positioned between objectivism and radical change), and the radical humanist paradigm (often associated with postmodernism and situated between subjectivism and radical change).

To clarify the contemporary relevance of these paradigms, Sułkowski introduced semantic adjustments to the original terminology proposed by Burrell and Morgan (1979), integrating frameworks taken from Bolman and Deal (2003), Hatch (1997), and the cognitive paradigms of management presented by Johnson and Duberley (2005). The matrix structure underlying this classification combines preferred social orientations (regulation vs. radical change) with epistemological assumptions about the nature of science (objectivism vs. subjectivism). Functionalism aligns with objectivism, whereas radical structuralism corresponds to radical change. Conversely, the interpretative-symbolic paradigm merges subjectivism with regulation, while postmodernism reflects subjectivism combined with radical change. As Sułkowski (2020) argued, these terminological refinements stem from the significant development of management sciences and related disciplines, which justifies modernising the nomenclature and criteria of paradigms.

The following subsections analyse how each of the four paradigms manifests in emergency management research. Although paradigms are typically stable and used by scholars over extended periods, they may also be supplemented, transformed, or replaced (Sudoł, 2014).

3.1. The Neopositivist-Functionalist Paradigm (Functionalism)

From an epistemological perspective, the neopositivist–functionalist paradigm focuses on constructing integrated systems and analysing cause-and-effect relationships. It emphasises the objectivity of social processes and the pursuit of truth, primarily through quantitative methods. Consequently, researchers working within this paradigm prioritise the mathematisation of findings and the development of mathematical models. Axiological neutrality, minimising researcher interference in the subject and object of inquiry, serves as a guiding principle. Functionalists view social systems as self-regulating and seek to produce objective, generalisable knowledge, consistent with Popper’s neopositivist philosophy (Popper, 2010). Mathematical formalism supports the development of theories based on sequences of causal relationships, motivating scholars to pursue high levels of generality and verification (or Popperian falsificationism). This paradigm remains dominant within management sciences (Sułkowski, 2020).

In emergency management research, functionalism manifests through simulation-based strategies (Yazdani & Haghani, 2024) and data-driven analyses of cause-and-effect variables. Quantitative approaches remain central, particularly in incident prediction and detection, resource allocation, and IT-based solutions (Mukhopadhyay et al., 2022). Current trends also include big data analytics and artificial intelligence-supported studies of disaster-chain scenarios (Huang et al., 2023). Quantitative methods facilitate the development of metrics and indicators that support the understanding of present phenomena and future risk patterns, especially in the context of climate change.

However, despite its strengths, the neopositivist-functional paradigm also presents limitations. Its focus on generalisable laws and quantifiable variables may oversimplify complex social dynamics inherent in emergencies. For example, quantitative models estimating evacuation times may fail to account for factors such as social trust, cultural norms, community vulnerabilities, or risk perception, thereby producing unrealistic or ineffective recommendations. A uniform, data-driven approach may be problematic in heterogeneous communities where local contexts vary significantly. Furthermore, the paradigm’s emphasis on objectivity may overlook the crucial value of subjective experiences, tacit knowledge, and community perspectives in shaping effective emergency responses.

These limitations indicate that, while invaluable for certain areas of emergency management, the neopositivist-functional paradigm should be complemented with perspectives that capture human behaviour, social context, and organisational culture. Nevertheless, the paradigm remains predominant,

as evidenced by widespread reliance on simulation models, algorithmic solutions, and statistical techniques in emergency management research (Mukhopadhyay et al., 2022).

Functionalism is also criticised for overemphasising the epistemology of the physical sciences and presenting a static, overly ordered image of organisations. This perspective may downplay behavioural and interactional dynamics, power relations, communication processes, cultural structures, and meaning-making, all of which are essential to understanding organisational realities (Sułkowski, 2020).

3.2. The Interpretative-Symbolic Paradigm (Interpretivism)

In contrast to functionalism, the interpretative-symbolic paradigm draws on the social and human sciences to explore how meanings are constructed and shared. It incorporates concepts such as social constructivism, the cognitive role of language, and practical engagement with socio-economic contexts (as emergency management often involves public or third-sector organisations rather than business entities). This paradigm relies on qualitative methodologies and shifts analytical focus from cause-and-effect mechanisms to interdependencies, interpretation, and intersubjective meaning-making (Sułkowski, 2009).

Interpretivism diverges sharply from neopositivist assumptions. Within emergency management, it informs research on coordination processes, information sharing, and stakeholder collaboration, particularly when consensus on terminology or shared understanding is essential (Lo et al., 2017). It also appears in studies addressing changes in organisational culture, such as the transition from incidental humanitarian aid to long-term development assistance (MacPherson & Sterck, 2021). These analyses reveal how organisations construct meaning, negotiate identities, and adapt to evolving social dynamics.

Rooted in constructivism, the interpretative-symbolic paradigm assumes that organisational order is continuously shaped and reshaped through internal and external interactions (Hatch, 1997). It highlights institutionalisation, internalisation, and formalisation processes, where economic, political, social, and psychological factors intersect (Sułkowski, 2020). The paradigm embraces value-laden, symbolic language and behavioural insights, shifting from the objectivity of positive economics toward the normative evaluation of organisational phenomena.

From the neopositivist standpoint, interpretivism is often criticised for lacking objectivity, offering limited generalisability, and failing to provide clear criteria for scientific evolution (Sułkowski, 2020). Indeed, if one adopts Kuhn's framework of scientific revolutions, the interpretative-symbolic paradigm appears relatively non-revolutionary.

While interpretivism provides essential insights into how individuals and groups construct meaning during emergencies, its context-specific nature may hinder the development of broadly applicable recommendations. Rich qualitative analyses of single communities may fail to generalise into different cultural settings or risk environments. The paradigm's emphasis on interpretation over prediction may also limit its usefulness in creating standardised procedures or large-scale emergency planning tools.

Nevertheless, interpretivism remains invaluable for advancing understanding of the human and organisational dimensions of emergency management. For instance, MacPherson and Sterck (2021) described how qualitative methods can powerfully illuminate transitions in humanitarian networks and the evolution of organisational roles and identities.

3.3. The Radical Structuralist Paradigm (Critical Theory)

Within Kuhn's framework of scientific revolutions, the radical structuralist paradigm can be understood as an application of critical theory to management. It assumes the existence of an objective organisational reality that requires fundamental reconstruction. In this view, the task of the social sciences is to reveal "camouflaged mechanisms of power, domination, and social inequality," and to

foster changes in consciousness and social structures rooted both in micro and macro-level power relations (Sułkowski, 2020). This paradigm therefore focuses on challenging organisational reality and emphasises the need for researchers to analyse the social mechanisms and transformative processes underpinning contemporary institutions. Unlike Popper's neopositivism, radical structuralism advocates qualitative, engaged research methods, leaning toward interpretative approaches and demonstrating relatively weak verificationism. Its ideological grounding has led some scholars to critique the paradigm for its one-sidedness and susceptibility to excessive politicisation.

Within emergency management, discussions often highlight a tendency to overlook individual behavioural patterns in favour of promoting "correct" population behaviour in risk-reduction strategies (Bernardini et al., 2016). This people-centred and culturally sensitive perspective stresses the importance of participatory learning and community-based management (Leneman et al., 2021). Such an orientation aligns with critical theory, emphasising the need to examine vulnerable groups, power structures, interests, and human–environment interactions. The shortcomings of centralised, authority-driven emergency responses are particularly evident in cases involving human rights violations, corruption, environmental harm, or obstruction of local communities (Imperiale & Vanclay, 2021), as well as broader critiques of the command-and-control model (Imperiale & Vanclay, 2019). Research also draws attention to the challenges of vigilance and responsiveness in emergency services, as demonstrated in studies of participatory surveillance (Knopp, 2023). Overall, the radical structuralist paradigm in emergency management predominantly criticises top-down power arrangements and their negative consequences. It also informs research on leadership and the increasing shift toward bottom-up processes involving local governments and community resources in emergency contexts (Bera, 2023).

The scientific ambitions of this paradigm rest on five core assumptions (Sułkowski, 2020): (1) a focus on power and oppression as central research themes; (2) ideological alignment with marginalised groups, emphasising emancipation and critiques of domination and injustice; (3) axiological entanglement, recognising that management practices and research are inherently value-laden; (4) critique of existing theory and practice, which often perpetuate inequitable organisational realities and managerialist ideologies; (5) use of engaged methods to counteract 'false consciousness' and promote organisational and social change.

Critical theory-oriented studies reveal significant challenges embedded in institutional structures and power relations. For example, Imperiale and Vanclay (2020) demonstrated how bureaucratic decision-making hindered resource allocation during disaster response, while Leneman et al. (2021) showed how power structures undermine emergency responses through corruption or the exclusion of local communities. Bera (2023) further highlighted the role of leadership and the growing importance of local governance in shaping more participatory emergency management processes.

While the radical structuralist paradigm offers a valuable critique of social inequality and power dynamics, a singular focus on oppression may risk overlooking other factors essential for effective emergency response. Overemphasising governmental failures, for instance, may obscure the self-organising capacity and resilience of affected communities. Therefore, although the paradigm provides powerful insights into structural inequities and institutional shortcomings, it should be balanced with consideration of collaborative processes, community agency, and the complexity of social interactions in crisis settings.

3.4. The Radical Humanist Paradigm (Postmodernism)

The final paradigm of the four is radical humanism, commonly associated with postmodernism. It is the most cognitively heterogeneous among the paradigms, reflecting significant internal inconsistency. As Sułkowski (2020) noted, even referring to it as a 'paradigm' is, to some extent, an overstatement. Postmodernism is characterised by subjectivism, cognitive relativism, fragmented research programmes, and scepticism toward science. This last element, in particular, attracts strong criticism.

Postmodernists reject the attainability of objective truth, framing knowledge within the dichotomy between objective and interpretative truth. Consequently, postmodernism occupies a marginal position within management science, nevertheless it offers valuable cognitive contributions, particularly through its critique of the epistemological foundations of management and its emphasis on the interpretative nature of organisational reality.

In emergency management research, postmodernist perspectives emerge in studies dealing with metaphors, narratives, and moral dilemmas associated with crises such as the COVID-19 pandemic. This line of inquiry focuses on subjective experiences, including the emotional labour of emergency workers, encounters with death, and the impact of crises on professional identity and purpose (Pilbeam & Snow, 2022). This normative, constructivist orientation also encompasses debates on rhetoric and response dynamics. Zebrowski (2019), for example, analysed how pressure for rapid action leads to 'event suppression', which may compromise safety and ethical decision-making. This produces paradoxes situated along the speed-versus-safety continuum and raises complex moral questions.

Despite its controversial status, postmodernism remains intellectually provocative, offering insights into emerging epistemological and ethical challenges (Sułkowski, 2020). The radical humanist paradigm foregrounds subjectivity, discourse, and ethical considerations, prompting critical reflection on how narratives shape our understanding of emergencies. However, its strong orientation toward relativism and deconstruction limits its practical applicability. A purely postmodern critique may reveal power dynamics and ethical dilemmas but provides limited guidance for developing operational strategies, allocating resources, or improving communication in emergencies. Furthermore, scepticism toward universal frameworks may hinder the creation of standardised procedures essential for coordinated emergency response.

Nonetheless, postmodernist approaches offer relevant empirical contributions. Pilbeam and Snow (2022) demonstrated how narrative analysis helps illuminate health workers' emotional experiences during the pandemic, while Zebrowski (2019) showed how conflicting stakeholder interpretations complicate response coordination. Even so, the paradigm's practical implications must be considered cautiously, particularly given the need for timely and effective crisis management.

3.5. Compilation of the Discussed Paradigms

Table 1 summarises the four paradigms applied in emergency management research, drawing on Sułkowski, Burrell and Morgan, Hatch, Johnson and Duberley, along with evidence from the emergency management literature. These paradigms constitute a fundamental foundation for methodological reflection in the social-scientific study of emergency management. The table synthesises their theoretical assumptions, methodological approaches, strengths, limitations, practical applications, philosophical positions, epistemological bases, and axiological stances. Together, they demonstrate how each paradigm offers a unique lens for examining the complexities of emergency management and contributes to a richer, more comprehensive understanding of the field.

Table 1. Analysis of paradigmatic frameworks in emergency management research

Criterion	Neopositivist-functional paradigm	Interpretative-symbolic paradigm	Radical structuralist paradigm	Radical humanist paradigm
Epistemological foundation	Objectivism, cause-and-effect research structure	Social constructivism, intersubjectivity	Objective reality requiring reconstruction	Subjectivism, cognitive relativism
Position of philosophy of science	Objectivism	Intersubjective	Intersubjective	Subjectivism
Research outcomes	Generalisable laws, verifiable results	Context-specific interpretations, social meaning	Critique of power relations, social change proposals	Ethical reflections, questioning of established practices

Criterion	Neopositivist-functional paradigm	Interpretative-symbolic paradigm	Radical structuralist paradigm	Radical humanist paradigm
Theory elements	Quantitative methodologies, cause-effect relationships, integrated systems, mathematical modelling, standardised protocols	Social constructivism, qualitative methodologies, interpretative approaches, network analysis, stakeholder perspectives	Power dynamics analysis, structural inequalities, critical analysis of organisational systems, engaged methodologies	Subjective experiences, narrative approaches, personal perceptions, moral considerations, rhetorical analysis
Research focus	Incident prediction and detection, resource allocation optimisation, IT solutions, big data analytics, simulation models	Mutual coordination, information sharing, partnership development, cultural context analysis, organisational dynamics	Power structures, command-and-control critique, participatory learning, human rights issues	Individual experiences, moral dilemmas, personal narratives, identity construction
Methodological approach	Quantitative methods, mathematical modelling, statistical analysis, algorithmic solutions	Qualitative methods, case studies, interpretative analysis, stakeholder interviews	Critical analysis, engaged research methods, power structure analysis	Narrative analysis, discourse analysis, phenomenological approaches
Strengths	Objective measurement, replicability, standardised procedures, clear metrics	Rich contextual understanding, cultural sensitivity, stakeholder engagement	Power dynamics awareness, systemic change potential, and social justice focus	Deep personal insights, ethical considerations, human experience understanding
Limitations	May overlook human factors, social context limitations, rigid frameworks	Generalizability challenges, standardisation difficulties, subjective bias risks	Ideological bias potential, practical implementation challenges	Limited generalisability, high subjectivity, implementation difficulties
Application examples	Emergency response optimisation systems, resource deployment models, risk assessment frameworks	Stakeholder coordination networks, cultural adaptation studies, organisational learning analysis	Power structure analysis in disaster response, community empowerment studies	Emergency worker experience studies, moral impact analysis
Theoretical contribution	Systematic frameworks, predictive models, standardised protocols	Understanding of social dynamics, cultural contexts, stakeholder relationships	Power structure awareness, systemic change mechanisms, social justice frameworks	Human experience insights, ethical frameworks, personal impact understanding
Practical implications	Enhanced operational efficiency, improved resource allocation, standardised procedures	Better stakeholder engagement, improved cultural sensitivity, enhanced coordination	More equitable response systems, improved community engagement, power balance awareness	A better understanding of human factors improved ethical considerations and enhanced personal support
Current role in management sciences	Dominant	Increasing	Increasing	Marginal
Axiological stance	Axiological neutrality	Engagement in valuation	Explicit critical stance	Moderate axiological neutrality

Source: own elaboration based on the literature analysis.

4. Conclusions

The multiparadigmatic nature of management sciences, along with the integration of theories drawn from various disciplines (primarily the social sciences and technical fields), results in a fusion of cognitive assumptions across paradigms. This phenomenon, referred to as transparadigmaticity, represents a polymorphic and eclectic use of paradigms within scientific inquiry. Conscious cross-utilisation of paradigmatic assumptions, reflected in theorising, research questions, methodological choices, and the acceptance of paradigm irregularities—supports a critical and self-aware research attitude characterised by paradigmatic openness. As noted by Czetwertyński (2019), such openness helps avoid intellectual imperialism. The multidimensional interconnections among paradigms also resonate with Kuhn's (1970) concept of scientific revolutions, which advocates moving beyond attempts to resolve the already settled issues.

From the perspective of scientific materialism (associated with Kuhn and Lakatos), reflection on paradigms is inherently linked to scientific progress grounded in material knowledge rather than dogma. Kuhn's (1970) notion of incommensurability, understood as the non-translatability of concepts, does not obstruct dialogue across paradigms. Instead, inter-paradigmatic relations invite efforts towards integration, unification, or synthesis. Seeking common ground while allowing unresolved controversies to persist is a hallmark of paradigmatic openness and leads naturally to transparadigmaticity. This aligns with Morgan's (1984) call for the synergistic coexistence of paradigms, which he viewed as a driver of development in the social sciences. The potential to transcend paradigms consequently opens pathways for developing new, multiparadigmatic approaches in management sciences, including emergency management.

The conducted analysis demonstrates the importance of cultivating paradigmatic self-awareness and openness in emergency management research. Scholars must recognise the ontological, epistemological, and methodological assumptions underlying their work and understand how these assumptions shape research questions, methodological choices, and interpretations. Each of the four paradigms discussed provides a distinct lens through which emergency management can be examined, yet each also presents inherent limitations. Combining the strengths of multiple paradigms can produce a more comprehensive, nuanced, and context-sensitive understanding of the complexities inherent in emergency management.

In order to achieve this, researchers should transcend the confines of a single paradigm and engage in interdisciplinary dialogue. This environment can be fostered through more explicit discussions of methodological assumptions in research publications, enhanced training in philosophy of science for emergency management practitioners, and a broader use of mixed-methods approaches that integrate the strengths of quantitative and qualitative inquiry. While this study relied on a specific framework of paradigmatic classification, further research should explore alternative frameworks and empirically analyse how researchers' paradigmatic orientations influence their findings. Ultimately, advancing paradigmatic self-awareness and openness is essential for strengthening the field of emergency management and equipping it to address the increasingly complex challenges of the twenty-first century.

The author acknowledges that the presented analysis does not exhaust the broad thematic scope of the philosophy of social sciences or management sciences. These areas continue to be the subject of vigorous debate, shaped by evolving social and cultural contexts. The topic of paradigmatic orientations in emergency management requires further clarification and deeper examination to capture all the characteristics that define the field. Nonetheless, the objective of this article has been achieved. In this epistemological context, paradigmatic self-awareness serves as a crucial foundation for understanding the nature of research conducted in emergency management. Rather than concluding the discussion, it opens new avenues for debate on the place of emergency management within both social and management sciences.

Further reflection on the paradigmatic nature of emergency management should highlight its diversity, theoretical underpinnings, and practical implications for decision-makers. Each of the four paradigms highlights distinct categories and conceptual concerns, many of which are only indirectly connected to the core domain of emergency management. This observation relates to broader challenges identified by Cornelissen et al. (2021), concerning the nature of theory in organisational research. From this perspective, an important question remains unanswered: *which theories in emergency management genuinely originate from the social sciences, and what is their rightful place within the discipline?*

References

- Bera, M. K. (2023). Flood Emergency Management in a Municipality in the Czech Republic: A Study of Local Strategies and Leadership. *Natural Hazards Research*, 3(3), 385-394. <https://doi.org/10.1016/j.nhres.2023.06.004>
- Bernardini, G., D'Orazio, M., & Quagliarini, E. (2016). Towards a 'Behavioural Design' Approach for Seismic Risk Reduction Strategies of Buildings and Their Environment. *Safety Science*, 86, 273-294. <https://doi.org/10.1016/j.ssci.2016.03.010>
- Blaug, M. (1992). *The Methodology of Economics: Or, How Economists Explain* (2nd ed). Cambridge University Press.
- Bolman, L. G., & Deal, T. E. (2003). *Reframing Organizations: Artistry, Choice and Leadership*. Jossey-Bass.
- Burrell, G., & Morgan, G. (1979). *Sociological Paradigms and Organizational Analysis*. Heinemann.
- Chalmers, A. F. (1976). *What Is This Thing Called Science? An Assessment of the Nature and Status of Science and Its Methods*. University of Queensland Press.
- Cornelissen, J., Höllerer, M. A., & Seidl, D. (2021). What Theory Is and Can Be: Forms of Theorizing in Organizational Scholarship. *Organization Theory*, 2(3). <https://doi.org/10.1177/26317877211020328>
- Czetwertyński, S. (2019). *Morfologia nieautoryzowanego kopiowania*. Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
- Drabek, T. E., & Hoetmer, G. J. (1991). *Emergency Management: Principles and Practice for Local Government*. International City Management Association.
- Gioia, D. A., & Pitre, E. (1990). Multiparadigm Perspectives on Theory Building. *The Academy of Management Review*, 15(4), 584-602. <https://doi.org/10.2307/258683>
- Hardy, C., & Clegg, S. (1997). Relativity without Relativism: Reflexivity in Post-Paradigm Organization Studies. *British Journal of Management*, 8(s1), 5-17. <https://doi.org/10.1111/1467-8551.8.s1.2>
- Hatch, M. J. (1997). *Organization Theory: Modern, Symbolic, and Postmodern Perspectives* (1st ed.). Oxford University Press.
- Huang, L., Chen, T., Deng, Q., & Zhou, Y. (2023). Reasoning Disaster Chains with Bayesian Network Estimated Under Expert Prior Knowledge. *International Journal of Disaster Risk Science*, 14(6), 1011-1028. <https://doi.org/10.1007/s13753-023-00530-w>
- Imperiale, A. J., & Vanclay, F. (2019). Command-and-Control, Emergency Powers, and the Failure to Observe United Nations Disaster Management Principles Following the 2009 L'Aquila Earthquake. *International Journal of Disaster Risk Reduction*, 36. <https://doi.org/10.1016/j.ijdrr.2019.101099>
- Imperiale, A. J., & Vanclay, F. (2020). Barriers to Enhancing Disaster Risk Reduction and Community Resilience: Evidence from the L'Aquila Disaster. *Politics and Governance*, 8(4), 232-243. <https://doi.org/10.17645/pag.v8i4.3179>
- Imperiale, A. J., & Vanclay, F. (2021). The Mechanism of Disaster Capitalism and the Failure to Build Community Resilience: Learning from the 2009 Earthquake in L'Aquila, Italy. *Disasters*, 45(3), 555-576. <https://doi.org/10.1111/disa.12431>
- Jankowski, K. (2016). Ewolucja pojęcia paradygmatu w „Strukturze rewolucji naukowych” Thomasa S. Kuhna. *Σοφία*, 16, 211-228. <https://doi.org/10.15584/sofia.2016.16.13>
- Johnson, P., & Duberley, J. (2005). *Understanding Management Research: An Introduction to Epistemology*. Sage.
- Kapucu, N., Arslan, T., & Demiroz, F. (2010). Collaborative Emergency Management and National Emergency Management Network. *Disaster Prevention and Management: An International Journal*, 19(4), 452-468. <https://doi.org/10.1108/09653561011070376>
- Knopp, P. (2023). Staying in the Game: Activation, Vigilance, and Normalization of Emergency Calls in Austria. *Surveillance and Society*, 21(4), 375-392. <https://doi.org/10.24908/ss.v21i4.15786>
- Kuhn, T. S. (1970). *The Structure of Scientific Revolutions* (2d ed.). University of Chicago Press.
- Leneman, M., Jordans, E., & de Balogh, K. (2021). Cultural Factors in Livestock Emergency Management. *Australian Journal of Emergency Management*, 36(3), 69-77. <https://doi.org/10.47389/36.3.69>
- Lo, S. T. T., Chan, E. Y. Y., Chan, G. K. W., Murray, V., Abrahams, J., Ardalan, A., Kayano, R., & Yau, J. C. W. (2017). Health Emergency and Disaster Risk Management (Health-EDRM): Developing the Research Field within the Sendai Framework Paradigm. *International Journal of Disaster Risk Science*, 8(2), 145-149. <https://doi.org/10.1007/s13753-017-0122-0>
- MacPherson, C., & Sterck, O. (2021). Empowering Refugees through Cash and Agriculture: A Regression Discontinuity Design. *Journal of Development Economics*, 149. <https://doi.org/10.1016/j.jdeveco.2020.102614>
- Morgan, G. (1984). Opportunities Arising from Paradigm Diversity. *Administration & Society*, 16(3), 306-327. <https://doi.org/10.1177/009539978401600303>
- Mukhopadhyay, A., Pettet, G., Vazirizade, S. M., Lu, D., Jaimes, A., Said, S. E., Baroud, H., Vorobeychik, Y., Kochenderfer, M., & Dubey, A. (2022). A Review of Incident Prediction, Resource Allocation, and Dispatch Models for Emergency Management. *Accident Analysis & Prevention*, 165. <https://doi.org/10.1016/j.aap.2021.106501>
- Niemczyk, J. (2020). Metodologia nauk o zarządzaniu. In W. Czakon (Ed.), *Podstawy metodologii badań w naukach o zarządzaniu* (pp. 17-27). Wydawnictwo Nieoczywiste.
- Pilbeam, C., & Snow, S. (2022). 'Thank You for Helping Me Remember a Nightmare I Wanted to Forget': Qualitative Interviews Exploring Experiences of Death and Dying during COVID-19 in the UK for Nurses Redeployed to ICU. *Mortality*, 27(4), 459-475. <https://doi.org/10.1080/13576275.2022.2144356>

- Popper, K. (2010). *The Logic of Scientific Discovery* (Special Indian Edition). Routledge.
- Sudoł, S. (2014). Podstawowe problemy metodologiczne nauk o zarządzaniu. *Organizacja i Kierowanie*, 1, 11-36.
- Sułkowski, Ł. (2005). *Epistemologia w naukach o zarządzaniu*. Polskie Wydawnictwo Ekonomiczne.
- Sułkowski, Ł. (2009). Interpretative Approach in Management Sciences. *Argumenta Oeconomica*, (2), 127-149.
- Sułkowski, Ł. (2020). Paradygmaty i teorie w naukach o zarządzaniu. In W. Czakon (Ed.), *Podstawy metodologii badań w naukach o zarządzaniu* (pp. 424-446). Wydawnictwo Nieoczywiste.
- Yazdani, M., & Haghani, M. (2024). Enhancing Community Resilience to Urban Heat Waves: A Simulation-Based Approach for Volunteer Management and Shelter Selection. *Progress in Disaster Science*, 23. <https://doi.org/10.1016/j.pdisas.2024.100331>
- Zebrowski, C. (2019). Emergent Emergency Response: Speed, Event Suppression and the Chronopolitics of Resilience. *Security Dialogue*, 50(2), 148-164. <https://doi.org/10.1177/0967010618817422>

Paradygmatyczny krajobraz zarządzania kryzysowego: ujęcie koncepcyjne

Streszczenie

Cel: Usystematyzowanie dyskursu paradygmatycznego oraz rozwój samoświadomości paradygmatycznej w naukach o zarządzaniu, ze szczególnym uwzględnieniem zarządzania kryzysowego.

Metodyka: Zastosowano podejście dedukcyjne oparte na szerokim przeglądzie literatury w celu klasyfikacji i analizy dotychczasowych badań w obszarze zarządzania kryzysowego.

Wyniki: Badanie wykazuje, że zarządzanie kryzysowe charakteryzuje się napięciem paradygmatycznym, multiparadygmatycznością oraz rosnącą transparadygmatycznością. Jednocześnie ujawnia, że badaczom często brakuje wyraźnej świadomości paradygmatycznej, co ogranicza spójność metodologiczną i utrudnia rozwój teorii.

Implikacje i rekomendacje: Artykuł podkreśla potrzebę precyzyjnego formułowania założeń filozoficznych, szerszego kształcenia w zakresie filozofii nauki oraz szerszego stosowania podejść mieszanych. Zaleca się również analizę alternatywnych klasyfikacji paradygmatycznych oraz empiryczne badanie wpływu orientacji paradygmatycznych na wyniki badań.

Oryginalność/wartość: Artykuł stanowi jedną z pierwszych kompleksowych prób zastosowania paradygmatów nauk społecznych do badań nad zarządzaniem kryzysowym, wzmacniając jego pozycję jako wyodrębnianej subdyscypliny w naukach o zarządzaniu.

Słowa kluczowe: zarządzanie kryzysowe, paradygmaty nauk społecznych, paradygmaty nauk o zarządzaniu, samoświadomość paradygmatyczna
