
EMERGING OPPORTUNITIES AND CHALLENGES OF MULTIDISCIPLINARY RESEARCH IN SOCIAL SCIENCES

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ABSTRACT

Multidisciplinary research in social sciences plays a pivotal role in addressing complex societal and environmental challenges by integrating diverse perspectives, methodologies, and knowledge systems. Social science disciplines, such as philosophy, history, and cultural studies, provide critical insights into human behaviour, culture, and values, which are essential for understanding and solving issues like health, climate change, migration, and technology. By contributing interpretive and participatory methods, social sciences foster nuanced approaches to resilience research, emphasizing human-environment interdependence and social-ecological dynamics. However, challenges such as resistance to social science research, philosophical divides, and underutilization of qualitative methods hinder effective multidisciplinary collaboration. Strategies like fostering shared understanding, promoting mutual respect, and addressing disciplinary tensions are crucial for overcoming these barriers. Social sciences also play a disruptive and innovative role in resilience research, offering frameworks to analyse power dynamics, social diversity, and inequities, while advocating for socially just and equitable sustainability transitions. Ethical considerations remain central to social science research, requiring careful navigation of cultural norms and universal principles. To strengthen contributions, social scientists must be treated as equal partners in multidisciplinary projects, with funding and training programs designed to support their leadership and integration. By embracing diversity, reflexivity, and transformative approaches, multidisciplinary research can advance sustainable and equitable futures.

KEYWORDS

Multidisciplinary Research, Social Sciences, Resilience, Sustainability Transitions

Multidisciplinary Collaboration.

EMERGING OPPORTUNITIES AND CHALLENGES OF MULTIDISCIPLINARY RESEARCH IN SOCIAL SCIENCES

The social science research plays a vital role in multidisciplinary projects, particularly in addressing complex societal challenges. Their contributions are essential for providing deeper insights into human behaviour, culture, and values, which are often critical for developing effective solutions. Here's why the humanities are important in multidisciplinary research. social science disciplines, such as philosophy, history, and cultural studies, offer unique perspectives on human expression, behaviour, and social life. This knowledge is crucial for understanding the human dimensions of societal challenges like health, climate change, migration, and technology. social science researchers often focus on how problems are framed and interpreted, which can lead to more nuanced and inclusive

approaches to research. For example, the arts challenge audiences to engage with questions in ways that go beyond predefined research frameworks. They provide critical and ethical lenses to interrogate assumptions, question dominant narratives, and explore alternative solutions. This "critique or transgression discourse" helps ensure that multidisciplinary projects address broader societal implications. social science disciplines often take a historical and cultural approach, offering long-term perspectives on societal issues. This can help contextualize current challenges and inform sustainable solutions. contribute creativity and innovative thinking to multidisciplinary projects, fostering new ways of understanding and addressing problems. Social sciences can deepen and expand social-ecological resilience research through multidisciplinary and interdisciplinary theories, methodologies, and critical perspectives.

Empirical research on resistance to social science is limited due to several factors rigorous empirical research has been conducted to research the origins, composition, and incidence of resistance. This leaves the analysis reliant on anecdotal evidence and guesswork. There is no comprehensive statistical information on the number of social scientists conducting research abroad or the trends in resistance across different countries. Without such data, it is difficult to assess the scope and scale of the issue. Resistance arises from a variety of interconnected factors, including fear, political hostility, cultural sensitivity, exploitation concerns, and saturation. The multifaceted nature of the issue makes it challenging to isolate and study specific causes. Resistance varies across countries, regions, and even within specific locations, making it hard to generalize findings or conduct uniform studies. academic community may not fully recognize the need for empirical research on this topic, as the issue is often viewed as anecdotal or secondary to the primary goals of conducting research abroad. Conducting empirical research on resistance would require significant funding, time, and effort, which may not be readily available, especially given the limited resources for social science research. the limited empirical research on resistance to social science abroad stems from a combination of insufficient data, the complexity of the issue, and a lack of prioritization or resources for such studies.

Multidisciplinary research in social science is increasingly central to policy, planning, civil society, arts, and social movements, emphasizing human-environment system interdependence. Effectiveness depends on integrating biophysical, environmental, and social knowledge, requiring cross disciplinary research that moves beyond natural sciences to include social sciences and humanities. The field has broadened from positivist approaches to interpretive and participatory methods, fostering richer understanding of social-ecological dynamics. The special feature aims to strengthen multidisciplinary collaboration, emphasizing that social sciences should not merely observe but also disrupt, challenge, and innovate within resilience research. social science theories, concepts, and methods can enrich resilience frameworks and challenge existing paradigms, fostering new ways of thinking about social-ecological systems (SEs). Several papers integrate established social science theories—such as Lewin's Field Theory, agrarian change, sociotechnical transition, social movements, and cultural practices—to analyse change, and transformation. The importance of understanding human and nonhuman actors, agency, and hybridity is emphasized, with Actor-Network Theory (ANT) and symbolic rituals illustrating how material and cultural dimensions influence resilience and recovery, especially post-disaster. The role of cultural and spiritual dimensions, traditional ecological knowledge, and participatory methods (e.g., ethnography, fuzzy cognitive mapping, PAR) are highlighted as vital for inclusive, rigorous resilience analysis at community and individual levels.

Social science research plays a critical role in driving organizational change by providing insights, frameworks, and evidence-based strategies to improve structures, processes, and relationships within organizations. Social science research helps identify factors that influence employee behaviour, motivation, and productivity. Research has inspired changes in managerial leadership and labour

relations, particularly in industries facing challenges like international competition or workforce shortages. Social scientists have facilitated joint labor-management initiatives, such as employee involvement programs and quality-of-working-life projects, to address workplace challenges collaboratively. Social science research has emphasized the importance of integrating technology and human relations, leading to innovative socio-technical systems that improve organizational efficiency and employee well-being.

Social sciences encompass diverse philosophical foundations, methodologies, and assumptions about human-environment interactions. These differences can create barriers to mutual understanding and integration. Engagement across disciplines often remains superficial, with limited efforts to deeply integrate theories, methods, and perspectives. This can result in siloed approaches rather than cohesive collaboration. Social sciences are sometimes relegated to a "service role" in multidisciplinary research, where their contributions are undervalued or treated as secondary to natural sciences. Scholars outside the social sciences may lack a clear understanding of the role social sciences can play in addressing sustainability and resilience challenges, leading to underutilization of their insights. Social scientists themselves may have competing views on the relevance and application of concepts like resilience, with some critiquing its limited focus on power, diversity, and human agency. Deep-rooted philosophical divides between disciplines can lead to resistance or skepticism about integrating certain theoretical approaches, such as critical theory or postmodernist perspectives. Effective crossdisciplinarity collaboration requires clear communication and shared language, which can be difficult to achieve when disciplines use different terminologies and conceptual frameworks. Coordinating efforts across disciplines often involves logistical hurdles, such as aligning research goals, methodologies, and funding priorities.

In multidisciplinary social science research Qualitative and participatory methods are underused but it is valuable for capturing complex social-ecological interactions, stakeholder perspectives, and cultural meanings. Examples include ethnography, PAR, fuzzy cognitive mapping, and symbolic analysis, which support inclusive, rigorous, and context-sensitive resilience assessments. Multi-disciplinary exchange benefits from integrating diverse methodologies, fostering dialogue between positivist, interpretive, and critical approaches. Moving beyond superficial integration, the modern research advocates for genuine dialogue that respects ontological and epistemological differences, avoiding reductionism. Approaches such as collaborative, complementary, and pragmatic multidisciplinary research are recommended, emphasizing sharing insights rather than forcing unification into a single framework. Recognizing disciplinary tensions and debates is crucial for fostering productive collaboration and avoiding ideological barriers.

Emphasizing the disruptive, innovative, and normative roles of social sciences can help resilience research address complex global challenges effectively analyze social science contributions to ecological research social sciences contribute significantly to ecological research by deepening the understanding of human and social dimensions within social-ecological systems (SEs). Social sciences offer diverse perspectives on social change, transitions, and transformations in SEs. Established theories like Kurt Lewin's Field Theory and agrarian change theory provide insights into the dynamics of change, while newer approaches like Actor-Network Theory (ANT) challenge traditional resilience thinking by emphasizing the role of both human and nonhuman actors. Social sciences explore the concept of agency, highlighting the interactions between human and nonhuman actors (e.g., trees, technologies) in shaping SEs and resilience. This broadens the scope of resilience research beyond human-centric perspectives. Social sciences research emphasizes the importance of cultural practices, symbols, and rituals in enhancing resilience. For example, studies on indigenous practices and post-disaster rituals demonstrate how cultural elements foster adaptation and recovery.

Genuine research in social science research provides better analysis of power relationships, social diversity, and inequities within research fields. These insights are crucial for addressing social justice and ensuring equitable resilience-building efforts. Social sciences introduce methodologies like participatory action research, ethnographic methods, and fuzzy cognitive mapping (FCM) to incorporate diverse perspectives, values, and knowledge systems into resilience research. Social sciences advocate for multi-, inter-, and transdisciplinary approaches to ecological research. This includes fostering genuine dialogue between disciplines, complementing methodologies, and addressing philosophical and epistemological differences. Social sciences encourage reflexive, action-oriented approaches that integrate diverse knowledge systems and perspectives. This helps reimagine the role of science in addressing complex societal and ecological challenges. By integrating social science theories, concepts, and methodologies, ecological research can better address "wicked" problems like climate change, food security, and poverty, ultimately guiding actions toward more sustainable and socially just futures.

Collaboration among disciplines in multidisciplinary research in social science can be facilitated through various strategies and mechanisms that promote effective communication, integration, and teamwork. Establishing a shared understanding of the research problem and objectives ensures alignment among team members from different disciplines. Focusing on problems that require multidisciplinary approaches helps unify efforts. Regular staff meetings, conferences, and informal discussions foster open communication and exchange of ideas. Developing glossaries of terms and definitions helps overcome semantic barriers and ensures mutual understanding. Encouraging group integration through shared goals, mutual respect, and collaboration. Fostering a sense of loyalty to the team and its objectives. Providing opportunities for researchers to learn about the methodologies and perspectives of other disciplines. Allowing researchers to pursue individual interests and publish in their own fields while contributing to the team effort. Budgeting time for personal reflection and reading to encourage creativity and insight. Recognizing and addressing potential conflicts arising from differences in motivation, personality, or disciplinary perspectives. Using advisory committees and external consultants to mediate and provide guidance. Conducting pilot studies to test methods and approaches before full-scale implementation. Using subgroups within the team to explore specific aspects of the research problem. Establishing clear agreements on authorship and credit to ensure fair recognition of contributions from all team members. By implementing these strategies, multidisciplinary research teams can overcome challenges and work effectively to achieve their shared goals.

Multi-disciplinary collaboration can significantly enhance sustainability transitions by integrating diverse knowledge systems, perspectives, and methodologies to address complex environmental and societal challenges. By combining insights from natural sciences, social sciences, humanities, and local knowledge, transdisciplinary collaboration provides a comprehensive understanding of sustainability issues, addressing both ecological and social dimensions. Collaboration across disciplines fosters creativity and "out-of-the-box" thinking, enabling the development of novel approaches to tackle sustainability challenges like climate change, food security, and poverty. Transdisciplinary approaches encourage reflexivity, where researchers critically examine their assumptions, methods, and roles. This leads to more adaptive and transformative solutions. Participatory methods, such as Fuzzy Cognitive Mapping (FCM) and Participatory Action Research (PAR), allow stakeholders to co-create knowledge and solutions, ensuring that interventions are inclusive and context-specific.

Social sciences contribute frameworks to bring out power relationships and inequities, ensuring that sustainability transitions are socially just and equitable. It promotes dialogue and integration between

disciplines, overcoming fragmentation and fostering shared understanding by focusing on practical applications and transformative actions, transdisciplinary collaboration ensures that research outcomes are directly relevant to real-world sustainability challenges. Collective processes of problem framing, experimentation, and learning enable continuous improvement and adaptation of sustainability strategies. Multi-disciplinary collaboration of social science research creates a robust foundation for sustainability transitions by leveraging the strengths of multiple disciplines and engaging diverse stakeholders in the pursuit of a more sustainable and equitable future.

Multidisciplinary engagement faces internal and external barriers, including philosophical divides, misunderstandings, and superficial collaboration. Greater transparency about disciplinary differences, tensions, and contested concepts can foster mutual understanding. The social sciences should continue to lead in demonstrating diverse perspectives, disruptive roles, and innovative methods to enrich resilience research. Building stronger, more inclusive collaborations requires acknowledging tensions, embracing diversity, and promoting open dialogue.

Ethical concerns arise when research risks causing physical, psychological, or moral harm to participants. For example, Milgram's study exposed subjects to involuntary self-knowledge, which is now considered ethically problematic. While some argue deception is necessary for certain studies, others believe it is inherently wrong and should be prohibited, especially when it risks harm or violates trust. Ethical debates often center on whether the benefits of research justify potential harm (consequentialism) or whether certain actions, like deception, are inherently wrong regardless of the benefits (deontology). Researchers must navigate ethical dilemmas when working with different cultures, balancing respect for local norms with universal ethical principles. Institutional Review Boards play a key role in overseeing research ethics, but there is concern about their expanding scope and potential to stifle certain types of research.

Strengthening social science contributions and cross disciplinary dialogue is vital for advancing social-ecological resilience toward sustainable, just futures. Future efforts should focus on integrating diverse theories, methods, and perspectives, fostering reflexivity, and supporting transformative pathways. Social science research contributions are often undervalued or misunderstood, with researchers and policymakers perceiving them as less relevant or harder to integrate into projects dominated by STEM disciplines. Researchers are frequently assigned instrumental or secondary roles in multidisciplinary collaborations, limiting their ability to lead projects or contribute meaningfully.

Multi-disciplinary projects should treat social science researchers as equal partners, ensuring their perspectives are integrated into the research process from the start. Funding calls should explicitly encourage social science-led research and include evaluation criteria that recognize the unique contributions of humanities disciplines. Training programs should help humanities researchers develop skills for multidisciplinary collaboration, including communication and project management.

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