2025/09/27

Towards Multi-Dimensional Collaborative Governance of Medical Research Integrity in China: A Stakeholder-Centric Strategy

Reporter:Cheng Yuxiaoqian

Introduction

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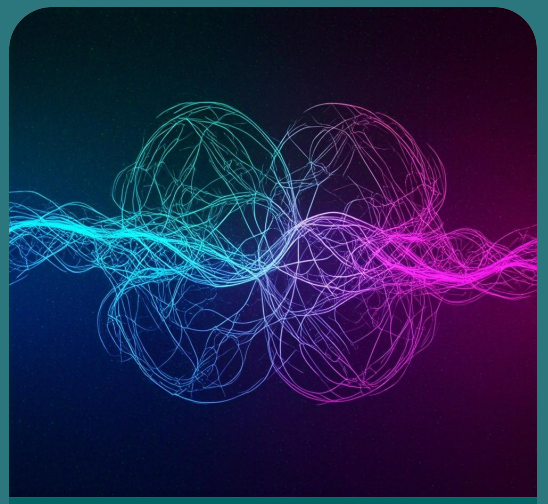

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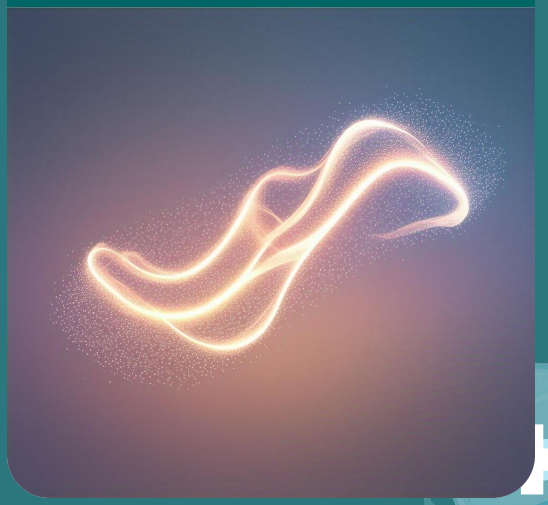


Brief Presenter Biography

Educational background

Education: Since 2023, Master of Health Policy and Management, Peking Union Medical College.
Undergraduate education: 2019-2023, Bachelor of Business Administration, Xi an International Studies University.

Research interests

Focus on medical informatization and artificial intelligence, medical scientific research management and health economy and policy evaluation

Skills and expertise

Proficient in Python, Spss for data analysis

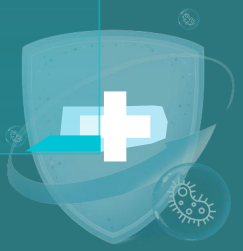
Research Interests and Current Projects

Focus of the study

- Research Focus: Governance of medical research integrity, health policy analysis, tech in healthcare.
- Core Areas: Medical ethics oversight, health strategies, digital health applications.

Current projects

- Beijing scientific research integrity reminder-research in the field of medicine and health
- The risk of artificial intelligence in scientific research dishonesty in the medical field: based on the prevention and treatment of global retracted papers
- Quantitative evaluation of scientific research credit policy in medical field based on policy consistency index model



Medical Research Integrity Challenge in China

Research background and problem

- Medical Research Progress: medical research sees swift advances, mirroring a rise in integrity concerns such as data falsification, copying, and undisclosed ghostwriting.
- Integrity Issues: Issues of integrity, including fabricated data, plagiarism, and ghostwriting, are on the rise amidst rapid medical research progress.

The importance of research integrity

- The cornerstone of research integrity: the foundation of scientific innovation, the source of public trust, and the guarantee of a healthy academic environment.
- The bond of scientific trust: connecting scholars with society, ensuring the authenticity and reliability of knowledge, and promoting harmonious progress in science and technology.

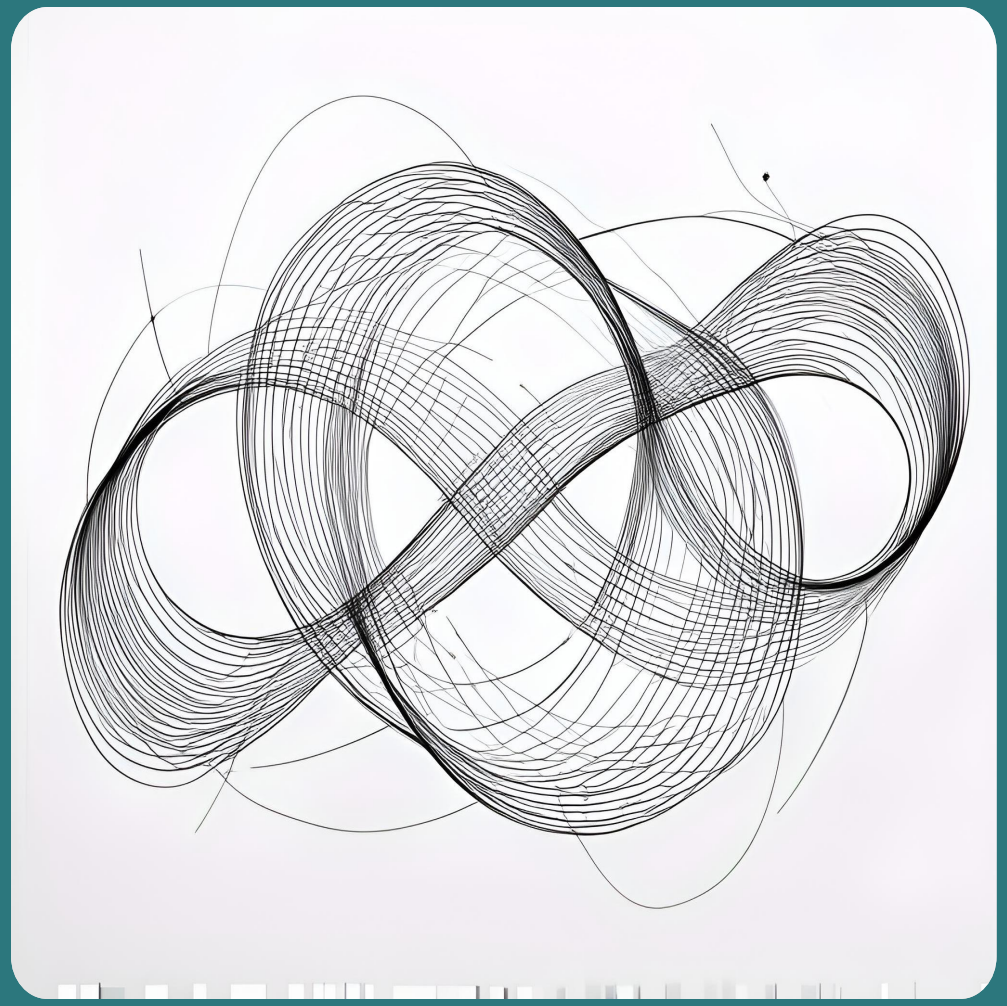
Government response

- Policy: Issued "Several Opinions" to strengthen research integrity, clarify guidelines, and promote academic standards.
- Medical norms: Introduced "Code of Conduct" to regulate practices, ensure data authenticity, and prevent misconduct.
- Policy focus: Strengthen integrity construction and standardize medical research. Development goal: Enhance integrity and regulate practices.

Research methods and framework

- Research Methodology and Framework: Applying stakeholder theory to construct a multidimensional collaborative governance framework.
- Implementation Challenges: Challenges in implementation and grassroots execution persist under the strong governance framework.

Theoretical Basis - Stakeholder Theory



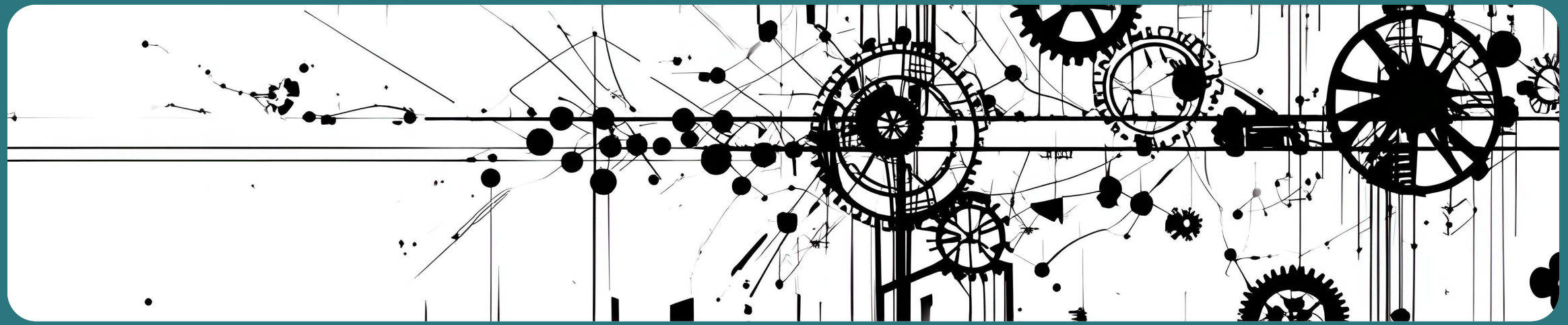
Stakeholder Theory

- Stakeholder Theory: This framework establishes that corporate success is intrinsically linked to the well-being of all stakeholders, including employees, customers, suppliers, and communities.
- Theoretical Basis: In medical research, stakeholder theory emphasizes inclusive practices, ensuring that the interests and perspectives of all participants are incorporated into the research process.
- Origin: Emerging from business management principles, this theory focuses on achieving balance between the needs and influence among multiple stakeholders.
- Practical Application: It serves as a tool for analyzing complex social issues in public health and research integrity fields.

Key Stakeholders

- Researchers: Individuals or teams conducting studies, seeking advancements in medical knowledge and treatments.
- Funders: Organizations providing financial support for research projects, often with vested interests in outcomes.
- Publishers: Entities responsible for disseminating research findings through journals and online platforms, ensuring academic integrity.
- The Public: General population with a vested interest in medical research outcomes, often influencing funding and regulatory priorities.

Stakeholder Management Challenges



Core stakeholder management

- Researchers: Direct implementers who ensure the ethical foundation of research.
- Research institutions: Responsible for system design and internal supervision to guarantee research compliance.
- Ethics committees: Independent oversight bodies that ensure human trials meet ethical standards.

Stakeholder management

- Funders: Influence research direction and avoid the risk of conflict of interest.
- Publishers: Maintain academic credibility through peer review.

External Stakeholders

- Policy Framework: Establish a robust institutional structure for effective governance.
- Transparency Promotion: Enhance openness via media and public discourse to foster trust.

Stakeholder Interest Demands and Interplay I

A zero-sum game among researchers

Researcher Conflict: In academic circles, disputes among researchers over authorship recognition, scholarly contributions, and resource allocation often resemble a zero-sum game – where one partys gain inevitably harms another.
Resource Allocation Controversy: Within constrained resource environments, conflicts between researchers for greater access to experimental funding, equipment usage rights, and publication opportunities have intensified the competitive atmosphere within academia.

The debate between freedom and performance of researchers and institutions

Academic Liberty: The heart of academia, enabling exploration without constraint, fostering innovation and critical thinking. Performance Metrics: Institutional emphasis on quantifiable outcomes, driving efficiency but potentially stifling creativity and deep inquiry. Resource Allocation: Balancing funds and facilities based on output and impact, crucial for sustainability yet challenging academic freedom. Freedom vs Metrics: The ongoing debate in academia, weighing the need for creative liberty against the demand for measurable success.

Stakeholder Interest Demands and Interplay II

Data disclosure choices under financial pressure

Financial Pressure: Researchers may alter data transparency due to sponsors financial influence. Selective Disclosure: Under funding stress, academics might selectively reveal data to please financiers.

The balance between the interests of institutions and publishers

Academic Influence: Institutions aim to disseminate research findings to enhance academic influence, focusing on knowledge contribution and scholarly impact. Profit Pursuit: Publishers, driven by the market, seek to maximize profits through publication, often prioritizing commercial viability over academic value.

Negotiations and compromises in multi-party cooperation

Collaborative Partnership: In multi-party collaborations, all stakeholders must clarify their roles, build trust, and share resources to achieve project objectives. Complex Dynamics: The intricate interactions among researchers, institutions, funders, and external partners require effective communication to reach consensus. Negotiation Skills: Master negotiation techniques to balance interests and find win-win solutions. Art of Compromise: When pursuing common goals, learn to compromise while respecting differences and maintaining collaborative harmony.

Visualizing the Stakeholder Game

Complex Interplay in Medical Research Ecosystem

Stakeholder Dynamics: The intricate dance and frequent clashes of interests among pivotal players in the medical research domain are depicted.

Diagram Explanation: Figure 1 encapsulates the nuanced relationships and competing agendas within the medical research communitys stakeholder network.

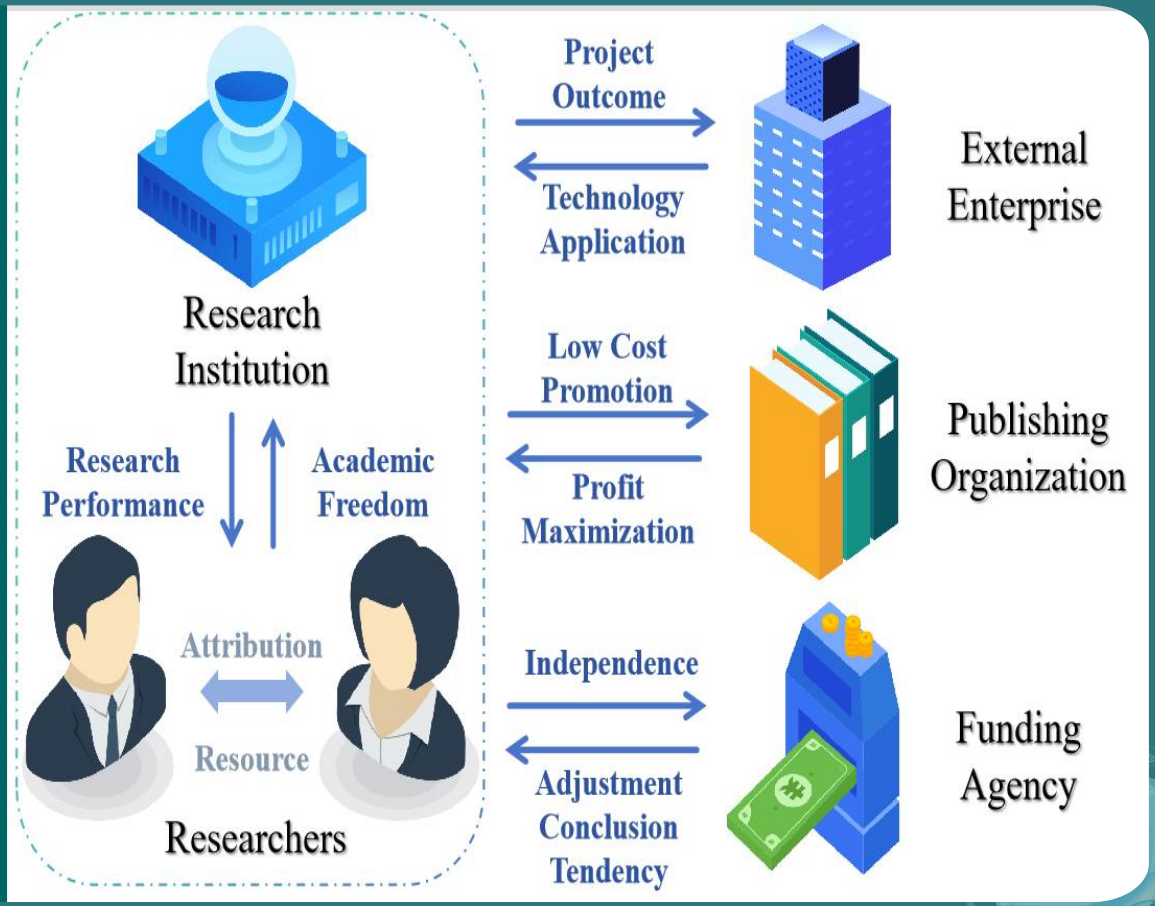


Figure 1 Game of stakeholders in "medical research integrity"

Collaborative Governance Framework

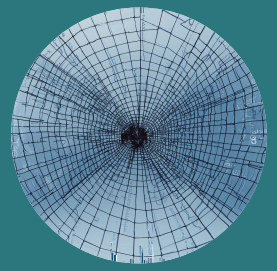
Proposed Collaborative Governance Framework

Stakeholder Roles: A multi-dimensional approach engaging each stakeholder with distinct roles to enhance synergy and mutual accountability.
Governance Framework: outlines the proposed collaborative governance structure, emphasizing integrated efforts and shared responsibilities.

Government Policy and Institutional Guarantee

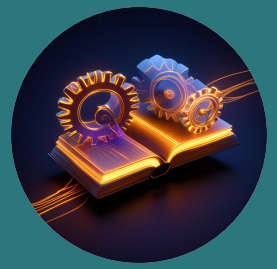
Enhancing Legal Frameworks and Archival Systems: Optimize legal frameworks to establish a tiered research integrity archive system. Linking Research Misconduct with Social Credit: Strengthen collaborative disciplinary mechanisms by integrating research misconduct with social credit systems. Reforming Cross-Department Collaboration and Evaluation Mechanisms: Promote interagency coordination, emphasizing innovation quality and reproducibility over mere quantity. Aligning with International Standards: Adopt global benchmarks such as the NIH and EU codes of conduct.

Collaborative Governance Framework



Publishing Institutions and Transparency

Enhance Peer Review: Strengthen peer review mechanisms through double-blind and data-transparent evaluations. Submit original data and experimental codes: Require submission of raw data and experimental scripts. Establish early warning systems: Develop monitoring mechanisms to track misconduct in high-risk journals. Promote post-publication peer review: Advance "post-publication peer review" practices. Foster open science: Drive transparency in research by implementing open access, preprints, and public databases. Standardize AI content usage: Regulate the application of AI-generated content in academic writing.



Scientific Research Institutions: Internal Governance and Culture

Establish a robust management framework: Develop a clear and standardized governance system. Strengthen the ethics committees role: Enhance its independence and professional expertise. Implement regular integrity education: Make research ethics training a standard component of academic training for students and researchers. Balance incentive mechanisms: Integrate integrity assessments into performance evaluations while maintaining balanced reward systems.

Collaborative Governance Framework

Scientific Personnel Self-discipline and Responsibility

Adherence to Academic Standards and Ethics: Strictly observe academic regulations and ethical guidelines. Ensure Complete Electronic Data Records: Utilize Electronic Laboratory Notebooks (ELNs) to guarantee data integrity and traceability. Proactive Disclosure of Conflicts of Interest: Disclose all potential conflicts of interest proactively. Prioritize Social Value and Safety: Give priority to social value and safety, ensuring clinical trials comply with the Declaration of Helsinki. Engage in Integrity Ecosystem Support for Open Data: Actively participate in integrity ecosystems, support open data initiatives, and report misconduct.

Conclusion and Future Research

Overview of conclusions

Summary of conclusions: To build an integrity ecosystem for medical research, multidimensional collaborative governance to enhance accountability and credibility. Framework objectives: The framework aims to improve the transparency and credibility of medical research, and enhance the integrity and fairness of research.

Future research direction

Verification framework components: Empirical research to validate the effectiveness of framework components. Assess policy implementation gaps: Evaluate policy implementation gaps. Develop conflict resolution tools: Build concrete tools to resolve conflicts of interest and enhance trust. Collect evidence of misconduct: Gather evidence of misconduct in China, assess policy impacts, and optimize strategies.

Thank You

Questions

Acknowledgment Response: Youre welcome! Always here to help. Feel free to ask any questions. Contact Information: For further inquiries, contact Yuxiaoqian Cheng at s2023026004@pumc.edu.cn. Looking forward to your messages.