Proceedings of
Tencent – CGS Academic Conference

Technology for Good: Driving Social Impact

Volume II
Poster Submissions

December 2025

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About the Conference

The Tencent and CGS Academic Conference was held on 19 November 2025 at the NUS Business School under the theme *Technology for Good, Driving Social Impact*. The conference brought together about 100 academics, industry leaders, and policymakers to discuss how digital tools can support fairness, strengthen public institutions, and improve daily life across Asia and beyond. The call for papers drew strong interest, with 134 submissions from five continents and 60 proposals carried forward as full papers, commentaries, or videos.

The keynote speakers opened the conference with wide-ranging reflections on AI and digital transformation. Professor Andrew Rose, Distinguished Professor and Dean of the NUS Business School at the National University of Singapore, delivered the welcome address and highlighted the growing influence of AI on society, emphasising the need for ethical and inclusive approaches. Mr Xiao Liming, Vice President for Sustainable Social Value at Tencent, reaffirmed the company's commitment to placing social value at the centre of its work and noted the continued cooperation between China and Singapore. Ms. Xu Xiaoxiao, Deputy Secretary-General of the China Association for NGO Cooperation (CANGO), highlighted how cross-sector partnerships under the "Tech for Good" framework empower social organisations, connect to global agendas, and leverage digital innovation to advance inclusive development. Dr Ming Tan, Senior Fellow and Founding Executive Director of the Tech for Good Institute and Senior Fellow at the Centre for Governance and Sustainability, NUS Business School, called for people-centred innovation and demonstrated how thoughtful digital design can widen access to opportunity.

The presentation session featured 20 selected works reflecting a wide range of research interests. Several papers focused on responsible and inclusive AI, addressing issues such as psychological safety in chatbots, governance frameworks, cross-cultural alignment, information pollution, and safer agentic systems. Other studies examined the societal effects of digital platforms, including philanthropic models, community technologies, migrant entrepreneurship, and public-sector cooperation.

The programme continued with a panel discussion on AI for global equity, adding further perspective. The speakers considered whether rapid AI adoption in Southeast Asia will widen opportunity or widen divides, and discussed investment trends, local digital readiness, and the need for systems that are both safe and practical. The session underlined the importance of sound governance and public education as AI becomes more embedded in everyday life. The conference concluded with awards recognising outstanding research papers, commentaries, and posters.

This conference proceedings present the research and posters presented during the conference. The publication is organised into two volumes. Volume I contains research papers and commentaries presented at the conference. Volume II contains posters submitted by the invited participants.

Event Agenda

9.00 am	**Registration**
9.30 am	**Welcome Address** **Prof Andrew ROSE** Distinguished Professor and Dean NUS Business School, National University of Singapore
9.35 am	**Keynote Address** **Mr XIAO Liming** Vice President, Sustainable Social Value Tencent
9.45 am	**Keynote Address** **Ms XU Xiaoxiao** Deputy Secretary-General China Association for NGO Cooperation (CANGO)
9.55 am	**Guest Keynote** **Dr Ming TAN** Senior Fellow and Founding Executive Director Tech for Good Institute Senior Fellow, Centre for Governance and Sustainability NUS Business School, National University of Singapore
10.05 am	**MoU Signing Ceremony**
10.15 am	**Research Presentations** Presentations of 20 selected papers and commentaries, including Q&A sessions with key expert judges
3.30 pm	**Panel Discussion** **AI for Global Equity: Bridging the Digital Divide and Unlocking Potential** **Moderator** **Ms Miro LU** Founder & Managing Director at Perspective Media Editor-in-Chief at Asia Tech Lens **Panellists** **Mr Benjamin GOH** Senior Assistant Director, National AI Group Ministry of Digital Development and Information, Singapore

Dr Jingyang HUANG
Assistant Professor
School of Public Policy
The Chinese University of Hong Kong (Shenzhen)
Mr Kenneth SIOW
Regional Director, Southeast Asia and General Manager
Tencent Cloud International
Mr Tim ZHANG
Founder & CEO, Edge Research Pte Ltd
Senior Fellow, Centre for Governance and Sustainability
NUS Business School, National University of Singapore

| 4.15 pm | **Award Ceremony** |
| 4.25 pm | **Closing Remarks** |

Prof Lawrence LOH
Director, Centre for Governance and Sustainability
NUS Business School, National University of Singapore

Acknowledgements

We also appreciate the moderator and panellists of the panel discussion on AI for global equity for their perspectives, which helped frame key debates and enriched the overall discussion.

1) Mr Benjamin GOH, Senior Assistant Director of National AI Group at the Singapore Ministry of Digital Development and Information;

2) Dr Jingyang HUANG, Assistant Professor at School of Public Policy The Chinese University of Hong Kong (Shenzhen);

3) Ms Miro LU (Moderator), Founder & Managing Director at Perspective Media and Editor-in-Chief at Asia Tech Lens;

4) Mr Kenneth SIOW, Regional Director, Southeast Asia and General Manager at Tencent Cloud International; and

5) Mr Tim ZHANG, Founder and CEO of Edge Research Pte Ltd and Senior Fellow at the Centre for Governance and Sustainability, NUS Business School.

We are thankful to all research presenters and participating researchers for their strong interest and high-quality contributions, addressing key issues related to technology and emerging artificial intelligence for social good. Their research, discussion, and exchange of ideas significantly enriched the conference and form the core of these proceedings.

Finally, we thank all conference participants for their active engagement and contributions to the exchanges and discussions. Their presence and participation were central to the success of the conference.

Centre for Governance and Sustainability (CGS)
NUS Business School
National University of Singapore

Project Structure

CENTRE FOR GOVERNANCE AND SUSTAINABILITY, NUS BUSINESS SCHOOL

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Lawrence LOH

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Lawrence LOH

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About Editors

Prof. Lawrence LOH is the Director of the Centre for Governance and Sustainability (CGS) at NUS Business School and serves as Professor in Practice of Strategy and Policy. He holds a PhD in Management from the Massachusetts Institute of Technology. He leads ESG market studies across Asia and the Pacific, ASEAN, and Singapore. He works as a consultant to Fortune 500 companies and international organisations and delivers executive education programmes for senior corporate leaders. He is a recipient of the NUS Annual Teaching Excellence Award and the NUS Business School Teaching Excellence Award. At CGS, he leads corporate governance and sustainability initiatives across Singapore and ASEAN. He teaches governance and sustainable business, regularly advises businesses and policymakers, and contributes commentary to major media outlets.

Bima Satria is a Research Associate at the Centre for Governance and Sustainability (CGS) at NUS Business School. He holds a master's degree in Public Policy from National University of Singapore. He has experience working as a consultant for international development organisations and national governments, contributing to policy design, programme preparation, and stakeholder coordination across issues on MSMEs development, local economic development, urban transformation, and sustainability agendas in Indonesia and Southeast Asia. At CGS, he is involved in multiple projects on corporate sustainability and governance.

About the Themes

The themes capture the overarching focus and scope of the work submitted by the researchers.

1. AI Governance and Regulation

The research under this theme examines how AI governance and regulation can guide the development and deployment of AI systems through rules, institutional arrangements, and ongoing oversight to ensure that their operation aligns with public interest objectives. These studies address the need for accountability in AI-mediated information, including the management of misinformation, information pollution, and the amplification of low-quality content. They also highlights comparative regulatory approaches across jurisdictions, illustrating how legal frameworks, economic instruments, and human supervision interact to support responsible AI use while safeguarding social welfare and public trust.

2. Cultural and Responsibility Dimensions

The research under this theme examines how cultural contexts and shared notions of responsibility shape the design, governance, and social reception of AI systems. These studies show that ideas of what constitutes "good" or "responsible" AI vary across societies, reflecting different moral economies, regulatory traditions, and social expectations around autonomy, discipline, care, and collective well-being. They also draws attention to the cultural consequences of AI-generated content, including concerns around homogenisation and the erosion of cultural autonomy, and proposes governance mechanisms that keep cultural values and human judgement in the loop. The studies underline the need for culturally adaptive and context-sensitive approaches to AI responsibility that respect plural values while maintaining accountability and social legitimacy.

3. Platform and Technological Dynamics

The research under this theme examines how platform architectures and technological design choices shape social interaction, economic coordination, and user behaviour across different contexts. These studies show how digital platforms function not only as technical systems but also as social infrastructure that can enable collective action, redefine accountability, and mediate access to resources. The research highlights the role of integrated interfaces, super-app models, and verification mechanisms in overcoming coordination and trust barriers, while also drawing attention to new forms of inequality, surveillance, and exclusion produced through platform dependence. The studies underline how technological design and platform governance actively shape social outcomes, calling for more intentional, inclusive, and context-aware platform development.

4. Social and Inclusion Impact

The research under this theme examines how AI can shape social inclusion and equity when it is designed and governed with explicit social impact objectives. These studies highlight AI as a potential enabler of development, communication, and service delivery, while also warning that without inclusive frameworks it may reinforce existing inequalities. The research spans global and local contexts, showing how AI can support international organisations, philanthropic initiatives, and nonprofit actors through improved data use, coordination, and decision-making. At the same time, it draws attention to structural exclusions embedded in dominant design assumptions, particularly for people with disabilities, linguistic minorities, and vulnerable communities. Collectively, the studies emphasise that meaningful social inclusion requires moving beyond access alone towards adaptive interfaces, cultural translation, and cross-sector collaboration, ensuring that AI systems expand participation, dignity, and well-being rather than narrowing them.

Content

(Sorted according to theme and title)

AI Governance and Regulation

AI, Rumours, and Trust: Evaluating Yuanbao on Summarising Weixin Official Account Articles

Wenjia Tang, University of Sydney; Justin Miller, Zhejiang University; Terry Flew; University of Sydney

Introduction

In Weixin's multi-layer communication ecosystem, AI chatbot *Yuanbao* exposes a gap between fluency and critical oversight, failing to flag or correct official account rumours and revealing tensions between readability, accuracy and trust, demanding accountable, human-grounded AI mediation.

Research Background

- Public trust in news media and digital technologies is eroding, as audiences confront information overload, politicisation, and opaque algorithmic systems.

- Weixin's semi-closed structure makes it harder to track encounters and circulations of fake news while simultaneously constraining its visibility.
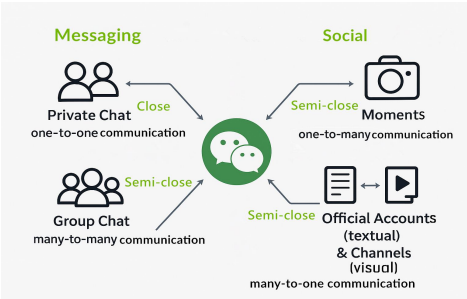
- The integration of LLM chatbots and summarisation features reduces cognitive and technical barriers to accessing professional content e.g., health articles.

- However, misinformation is often repackaged into more digestible language by LLM summary.

- Could an all-in-one tech structure and advanced AI solutions help address trust-decrease issues?

Method

Qualitative analysis of 53 rumour-correction article pairs from Weixin Official Accounts.
Each article was input into Yuanbao with prompts to summarise, identify misinformation, warnings and sources. Outputs were manually coded against six trust-related dimensions (reason-driven and intention-driven).
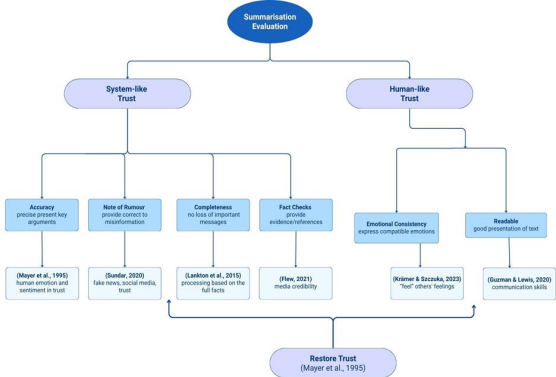
Results
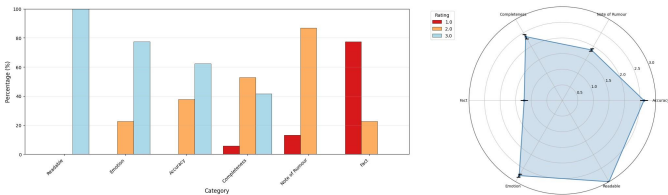
- **Readability**: All summaries (100%, 53/53) scored highest (3.0), using simple, accessible language regardless of content complexity. Yuanbao consistently produces fluent, easy-to-understand text

- **Emotional Consistency**: Most summaries (77.4%) maintained the source's stance; none contradicted it, showing high narrative fidelity.

- **Accuracy**: Moderate but acceptable. Key arguments were correctly replicated in 62.3% of cases, though 37.7% contained deviations in supporting evidence. Generally reliable paraphrasing of core claims.

- **Completeness**: Performance varied, with 41.5% missing no information, but 5.7% excluding key details entirely.

- **Note of Rumour**: No summary (0%) proactively corrected misinformation. Most (86.8%) only partially acknowledged rumours when directly prompted, nor clearly signposted that the original article had been labelled as misinformation.

- **Fact Checks**: The lowest-performing criterion (score: 1.23). Most summaries (77.4%) contained no references, showing no autonomous fact-checking. Users are left to shoulder verification on their own.

Discussion

Yuanbao sounds trustworthy, it doesn't safeguard trust
Yuanbao's summaries are consistently fluent and readable, which can make them appear trustworthy. Yet this technical fluency is not matched by critical oversight: the chatbot reproduces rumour content without clear warnings or corrections, risking misplaced confidence in misleading health information.

Summarisation lowers barriers to all content: both reliable and unreliable
By compressing long articles into short, accessible texts, Yuanbao and similar LLM tools reduce the cognitive and time costs of engaging with public health content. However, when the underlying material is misleading, this same efficiency accelerates the uptake and potential sharing of problematic claims.

Designing accountable, human-grounded AI mediation
Our findings argue that AI systems need built-in mechanisms to flag rumour labels, surface corrections and encourage verification. Human editorial oversight, transparent design, and clearer signaling of uncertainty are essential if AI mediation is to genuinely support, rather than erode, public trust in health communication.

What can we do next?

Technical fluency does not equate to trust-building:
By enhancing the readability and coherence of rumours without providing corrective warnings, the AI may inadvertently increase the persuasiveness and shareability of misinformation, thus undermining, rather than supporting, public trust.

For AI to fulfil a "Technology for Good" role, technical refinement must be coupled with its integration into transparent information infrastructures. Granting tools like Yuanbao access to platform-level trust and safety signals (e.g., rumour labels in Weixin) is essential for evolving from a neutral summarizer into an active agent for trust.

Therefore, we suggest:
① Integrate Platform Safety Signals, ② Design for Verifiable Context,
③ Foster Collaborative Fact-Checking with Regulation.

[Equalizer or Divider? Generative AI Through the Lens of Education]

[Isabell Chew Pei Ling, National university of Singapore]

Equalizer or Divider? Generative AI Through the Lens of Education

By: Isabell Chew

Introduction

- Public debates often oversimplify AI as purely beneficial or harmful, but this hides the institutional and governance factors that determine its impact.

- AI is value neutral. Its social outcomes depend on regulation, incentives, and cultural norms rather than technical capability alone.
- Traditional economic indicators such as GDP and productivity do not reveal who gains or who is excluded.
- The key insight is that AI acts as an amplifier. It strengthens existing structures and inequalities unless deliberately guided toward inclusion.

Case Studies

MOE + iFLYTEK

- Deployed AI-enabled teaching tools through the Zhixuewang platform.
- Supports lesson prep, in-class interaction, and personalised feedback.
- Students complete ~30 minutes of personalised self-study daily.
- Now covers 1,000+ schools and 1M+ learners in under-resourced areas.
- By contrast, platforms like ChatGPT rely on subscription models, creating access barriers.

MOE Edtech Plan

- MOE's EdTech Plan introduced adaptive learning systems in public schools.
- Open-access algorithms target weaker students, especially in maths.
- Fully funded and designed for low-end devices → accessible to students across all income levels.

Education as a test case

- Education is often viewed as society's equalizer, but hidden inequalities in tutoring, parental resources, and cultural capital persist even when schools appear equal.
- Wealthier students have greater access to advanced AI tools, while poorer students often engage with lower quality or restricted versions.
- In China, the Gaokao system intensifies inequality because a single exam controls university access and small advantages accumulate.
- Western systems have multiple pathways, so the impact of AI is more diffuse.
- Education shows clearly that AI's impact is not determined by the technology itself but by the systems in which it is deployed.

How can technology transform education?

1. Access: Who gets to use AI?

- AI does not equalise by itself — access determines everything.

Policy implication : States must treat AI access as a public good. This means funding shared infrastructure, removing paywalls, and designing systems that work on low-cost devices so the weakest learners benefit first.

2. Quality: What AI teaches and how?

Test - centric → Inquiry - centric

Policy implication: Design AI to support inquiry, reasoning, and conceptual understanding not merely exam optimisation. Move from generic tools → adaptive, equity-oriented learning systems. AI learns each student's cognitive style (visual, conceptual, problem-solving). Tracks long-term progress, identifies weaknesses, offers targeted feedback

3. Cater to different learning motivations

- Deploy differentiated AI use cases for urban and rural communities to maximise reach.
- For students, relevance means inquiry and meaning.
- For rural communities, relevance means daily utility.
- Different motivations → different impacts.

rural vs. urban

CONCLUDING INSIGHT: AI IS NOT INHERENTLY EQUALISING OR STRATIFYING; ITS IMPACT DEPENDS ON GOVERNANCE, INSTITUTIONS, AND ACCESS. ITS EQUALISING POTENTIAL LIES IN DELIVERING PERSONALISED LEARNING AT SCALE, TURNING A ONCE EXCLUSIVE FORM OF SUPPORT INTO A WIDELY ACCESSIBLE ONE.

Jointly organised by — NUS Centre for Governance and Sustainability, NUS Business School — TENCENT — Supported by CANGO CHINA ASSOCIATION FOR NGO COOPERATION 中国国际民间组织合作促进会

3

XuBing;Yang Yujun,Communication University of China

Flow for Good:
Public Value Reconstruction in the Global Digital Public–Opinion Ecosystem

The evolution of digital communication has transformed online flow into a crucial resource for social power.

With algorithmic logic dominating attention allocation, flow has shifted from a mere commercial indicator into a core-driven force in setting public agendas, accompanied by emotional manipulation and simultaneously leading to public opinion polarization and a crisis of social trust.

The concept of "Flow for Good", first proposed by Chinese academia, aims to ensure that flow resources serve public rationality and collective well-being through the synergistic constraints of technology, institutions, law, and ethics.

Based on this, this paper attempts to define the connotation and denotation of "Flow for Good", analyze five structural obstacles to flow governance, and explore a collaborative path of institutionalization and socialization.

In the future, global digital communication governance practices need to be guided by ethical order, incorporating the social allocation of attention resources into a framework of public values, thereby promoting the digital communication system towards a higher level of civilization.

Grassroots Innovation and Sustainable Social Impact in the Age of AI: Lessons from Europe, Southeast Asia, and China

LI BOLUN (Diinsider & Peking University), SHEN JUNZHE (HEC Paris & Yale University)

Why does it matter: the opportunities for multinational tech companies in supporting impactful grassroots-driven innovation

The era of generative AI has not only transformed industries but also expanded the boundaries of multinational corporations' (MNCs) social influence Beyond the vast wealth and data resources created, AI equips global firms with new capabilities to address complex societal challenges in the bottom-of-the-pyramid (BOP) market.This new technological capacity redefines what corporate responsibility can mean in the digital age: not merely compliance or philanthropy, but a strategic avenue for creating shared value and inclusive innovation..

However, this potential remains largely underdeveloped. A recent World Economic Forum report shows that from almost 100 AI initiatives reviewed, only 31% focus on positive social impact. Meanwhile, less than 1% of all budgets allocated to AI are primarily focused on positive impact. In addition, these initiatives tend to mainly focus on high-income countries, bringing challenges on equal access for communities and innovators in low- and middle-income countries (WEF, 2024). This imbalance reveals a substantial opportunity space to use technology for inclusive growth.
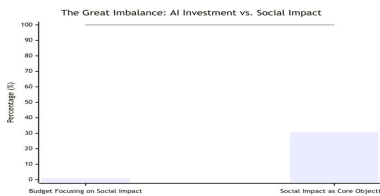

Figure 1: The gap in impact driven investment from AI MNCs

To provide a structured answer to the question of why should MNCs step into creating tangible positive impacts, three specific lenses are proposed in this article: learning through collaboration, growing through disruption, and leading through responsibility.

Learning through Collaboration: Enhancing data access

From an open-innovation and co-creation perspective, learning increasingly occurs beyond corporate boundaries. Local innovators and communities generate high-context knowledge and data that can refine AI models and make them more equitable. Based on the authors' previous practice, grassroots innovations are activities with profound amount of data generation, though with a lack of standardization of data collected. Enhancing data access and equity therefore becomes both an investment in AI accuracy and a pathway for inclusive innovation. The question for AI and tech companies is, how to identify the best paradigm of data collection in this arena, clean and make them a high-value resource for both corporate needs and sustainable development.

Growing through Disruption: Identifying emerging business opportunities

Nowadays it is more and more believed that MNCs can serve "long-tail" markets by leveraging digital platforms to offer a vast range of specialized and niche products to millions of micro-segments for customers. MNCs such as Amazon and Volkswagen have successfully adopted this strategy through increasing product varieties and reducing distribution costs, catering to diverse consumer needs to identify new profit streams. Through collaborating with leading grassroots innovators, MNCs would have the opportunity to accelerate this process and secure new revenue streams by expanding customer bases. As AI emerges to become one of the top interests of grassroots innovators, the role established MNCs can play has become more significant than before. By engaging with grassroots innovation, MNCs can internalize the process of creative destruction and transform potential disruption into an engine for inclusive growth.

Leading through Responsibility: Aligning corporate sustainability with human and earth sustainability

Leading through responsibility means turning sustainability from a compliance requirement into a genuine co-creation process that connects business success with human and planetary resilience. Globally, grassroots innovation has played a vital role in opening up new space for both technological and social advancement, reinforcing the role of the people (workers, peasants, women, indigenous communities) in developing their own solutions. Through such efforts, they also created new visions or alternative solutions towards sustainability and social inclusion (Wasteless Future, 2016). In addition, grassroots actors are eager to participate in developing solutions to local challenges, as well as gain voice in the broader debate on technology and development.

Figure 2: Our people who have influenced this research for the past 10 years

How should it work: A 'CITI' framework for MNC's Engagement with Grassroots Innovation Ecosystems

Established tech MNCs companies can identify suitable grassroots innovation to collaborate through the following four pathways: Connect, Invest, Transform, and Inform (CITI). This analytical framework is developed based on the authors' field observations and professional practices in Asia and Europe, where multinational technology companies have engaged with grassroots innovation ecosystems in different capacities.
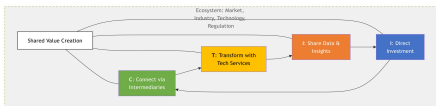
Figure 3: the CITI Framework

1)Connect through an intermediary (C)

Open innovation depends on cross-boundary collaboration, where intermediaries bridge global firms and local innovators. Intermediaries can be incubators, research institutes, non-profit organizations, social enterprises and multilateral institutions that work to mobilize resources and build ecosystems for impact initiatives to grow. The design programs, disseminate information, facilitate network and access, provide capacity building opportunities and grassroots in sights for MNCs to understand and identify the best way to invest resources in the impact sector. Some larger tech companies, despite the willingness and executive commitment on providing resources to support use of AI by social enterprises, often may require more infrastructure to deploy such initiatives. Intermediaries play a crucial role in helping these organizations implement their initiatives.

While in other regions such as Europe, intermediaries may play more role on being a knowledge and capacity development platform, based on the authors' observation. For instance, Station F in Paris brings together major multinational technology firms such as Meta, Google, and LVMH to collaborate with early-stage social innovators, offering incubation programs, AI mentorship, and open access to corporate networks. This model illustrates how MNCs can act as ecosystem partners rather than distant sponsors. While in ASEAN, incubators curate AI-driven impact programs mainly through tech MNCs' program support.

Figure 4: Station F

2)Direct investment (I)

Compared with collaborating with an intermediary, a more straightforward model is to directly invest in grassroots innovators that adopt AI and digital technology in creating social benefits. Besides equity investments, debt and grants are another two common forms of direct investments from MNCs, which serve as the core approach to building ecosystems, especially when the market is not mature and products are in early stages. For stronger social innovators with solid customer base and certain tech skills, MNCs can also consider establishing joint ventures together with innovators. For example, MNCs and local tech driven innovators can establish joint venture to develop hardware with the capacities of edge computing, or AI-driven machinery for industries such as agriculture, healthcare and renewable energy. Through this approach, the possibility of scaling up effective solutions could be strengthened.

3)Transform with provision of technology services (T)

Beyond financing support, provision of technology services can also be an appropriate strategy for MNCs to break into this field. The technology services can be either software services or hardware services. As Prakash (2025) highlights, accessible AI and robotics solutions can help local innovators in developing regions create scalable impact with limited resources.

4)Sharing of data and insights (I)

For both MNCs and grassroots innovators, sharing of data and insight is a common interest for partnership. For MNCs, data and insights from the grassroots and impact sector are important information additional to their operational data and insights, thus creating space to harness their skills and technology to expand potential operation. For grassroots innovators, sharing of data and insights from MNCs can provide professional access to large scale and cross-national information that is helpful to identify most effective and efficient solutions to the challenges they aspire to address. Such collaborations can help rebalance power asymmetries in the innovation ecosystem, allowing grassroots innovators to contribute to and benefit from data-driven insights.

Contact the author at bolun@diinsider.com

Reclaiming the Human in Data Governance: Balancing Efficiency and Equity in Cross-Border Digital Payment Platforms

Evidence from WeChat Pay in Singapore

Kexi (Corsini) Wu, Xin Huang, Omid G. Nasrabadi, Chou Kai-Wei, Chengjie Jiang

01 Introduction

Cross-Border Privacy \Trust\Governance\Equity

As global fintech platforms expand across borders, they are increasingly caught between the demands of technological efficiency and equitable access. WeChat Pay's biometric payment pilot in Singapore offers a timely case to examine how cross-border data governance intersects with **user trust, legal compliance, and digital inclusion.**

While these platforms promise seamless transactions, they also raise urgent questions:
Whose laws apply when data crosses borders?
How do users perceive the risks of biometric data collection?
Can AI tools support real-time compliance without compromising human oversight?

This study explores these tensions through a mixed-method analysis of WeChat Pay's operations in Singapore, focusing on the Privacy–Trust–Governance framework.

02 Framework & Methodology

Cross-Border Privacy \Trust\Governance\Equity

To understand how biometric payments are governed and perceived across jurisdictions, we developed a t**hree-dimensional analytical model: Privacy, Trust, and Governance.**

Our methodology integrates:
- Legal-text analysis comparing China's Personal Information Protection Law (PIPL) and Singapore's Personal Data Protection Act (PDPA)
- Survey design grounded in PDPA clauses, translated into bilingual (English/Chinese) Likert-scale items
- AI-assisted policy review to test the feasibility of automated compliance monitoring

The main variables include **perceived privacy risk, technology trust, institutional trust, use intention, and social influence.** Each construct was derived through a systematic clause-to-item mapping process to ensure both regulatory validity and behavioral relevance.
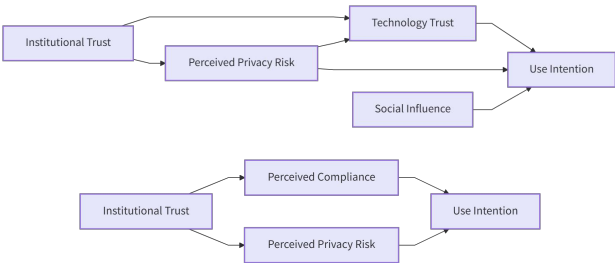
03 Key Findings

Cross-Border Privacy \Trust\Governance\Equity

First, cross-border biometric payment systems face structural legal misalignment. China's PIPL enforces local data storage and state-approved transfers, while Singapore's PDPA allows overseas transfers with "comparable protection." This forces platforms like WeChat Pay to adopt data fragmentation, creating compliance but also inefficiency, security risk, and regulatory gaps.

Second, user adoption depends more on institutional trust than on technology. Survey results show that confidence in Singapore's PDPA and PDPC mediates privacy concerns—when users trust regulators' transparency, they are more willing to use biometric payments. Legal credibility thus rivals technical reliability.

Third, AI aids but cannot replace human oversight. Though it improves real-time compliance and risk detection, excessive reliance on algorithms may obscure ethics and weaken transparency. Sustainable governance demands continuous human supervision, especially across cultural and legal boundaries.

Issue Dimension	China's Requirement	Singapore's Requirement
Data Storage	Data must be stored locally	Data can be transferred, but protection must be ensured
User Consent	Explicit and separate consent required	Explicit consent required, but can be withdrawn
Data Usage	Limited to authorized purposes	Purpose must be specified in advance
Regulatory Mechanism	Government pre-approval	Post-hoc accountability and self-regulation

04 Policy Implications

Cross-Border Privacy \Trust\Governance\Equity

Our study offers actionable recommendations for three stakeholder groups:
 For Regulators:
- Establish regional data governance dialogues, such as an ASEAN–China biometric data forum
- Introduce a "Biometric Data Use Label" certification scheme to visualize compliance levels
- Pilot AI-assisted compliance sandboxes with mandatory human-review protocols

For Enterprises:
- Embed data-minimization-by-design principles from the outset
- Provide user-friendly privacy dashboards with one-click consent withdrawal
- Localize services through multilingual interfaces and culturally adaptive designs

For Users and Civil Society:
- Promote digital privacy education through public campaigns and community programs
- Encourage public participation in policy-making via feedback channels and open consultations
- Empower users to exercise their statutory rights under PDPA: access, correct, and delete their data
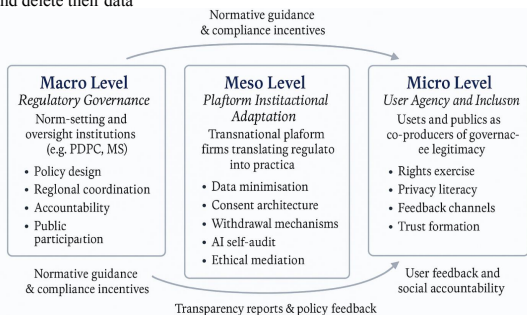
05 Conclusion & Contribution

Cross-Border Privacy \Trust\Governance\Equity

This study reframes the globalization of biometric payments as not just a technological rollout, but a governance negotiation. By integrating legal analysis, user perception, and AI governance potential, we offer a holistic model for understanding **how digital platforms become co-architects of transnational regulation.**

Our Privacy–Trust–Governance framework extends traditional technology acceptance models by incorporating institutional legitimacy and legal culture as core drivers of user behavior. Practically, the findings provide a roadmap for compliant, inclusive, and trustworthy cross-border payment systems.

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Struggling in the Middle: Understanding Adolescents Self-Regulation Amid Family, School, and Peers in Singapore

Aaron Pengyu Zhu, Shenglan Cui, Janghee Cho
Division of Industrial Design, National University of Singapore

01 BACKGROUND

DIGITAL NATIVE

Mobile technology use from an early age and seamlessly integrating mobile technology into teens daily lives.

Teen daily mobile phone usage time in Singapore

8.5 Hours

Negative Impact
- Affect Academic Performance
- Digital Social Relationships
- Harm Mental & Physical Well-being

Current Regulation

Current top-down controls, like screen time limits and parental settings, are easily bypassed through tactics like using adult accounts or reinstalling apps.

Parental Control — Tension — Teenagers — Tension — School Control
Peer Support
Government Guideline
Mobile System

RQ1 — Regulation Strategies?
What forms of *regulation strategies* do adolescents experience in their daily mobile devices use?

RQ2 — Self-Regulation
How do different regulation strategies shape adolescents' patterns of *self-regulation* in mobile technology use?

RQ3 — Implications?
How can these strategies be translated into technology improvement and design implications?

Scan to get full paper

02 METHODS

01 Phone Use Habit — 40 min
Sharing the top 5 most frequently used Apps, and reflect App use with drawing cards
Question Cards

02 Regulations — 45 min
Sharing vignettes, reflecting and mapping with regulation cards
Regulation Cards

03 Making — 30 min
Making self-regulation Magic Machine and writing speculative vignettes
Ideation Template

03 FINDINGS

Alternatives? as Self-Regulation Strategies.
- Self-regulation emerged as reactive and externally conditioned rather than autonomous
- Perceived self-control often masked self-deceptive rationalization.

Regulation Strategies
Bypassing

Limited Agency under Parent-Centered Control
- Top-down control generates emotional resistance and erodes trust
- Regulation reflects parental routines rather than adolescents' needs.

School Strategies for Managing Smartphone Use
- Institutional regulation at school reinforces external control and limits autonomy.
- Inconsistent and overly rigid enforcement fosters bypassing behaviors

Bypassing Strategies in Response to Control
- Bypassing practices reflect adolescents' creative negotiation under restrictive systems.
- Technology and *peer cultures* shape the dynamics of bypassing.
- Adolescents were more inclined to discuss bypassing strategies with peers rather than share ways to support regulation.

04 DISCUSSION

StudySync
Designing Priority-Oriented Incentive Mechanisms to Foster Self-Regulation

ChronoCase
Designing tangible devices as a medium for somatic intervention.

Invisible Phone
This case does not focus on self-regulation, but rather seeks to gain greater autonomy.

Agency as Negotiation, Not Resistance

Learning to Negotiate Agency through Bypassing

The Economics of Information Pollution in the Age of AI: General Equilibrium, Welfare, and Policy Design

Yukun Zhang，The Chinese University Of Hongkong；Tianyang Zhang，University of Macau

Abstract

- This paper develops a novel general equilibrium model to analyze how generative AI acts as an asymmetric technological shock in information markets—substituting for labor in low-quality content production while merely complementing high-quality creation. This asymmetry systematically lowers the cost of producing "lemons" over "peaches," driving the ecosystem toward a "Polluted Information Equilibrium" sustained by three failures: a production externality, platform governance misalignment, and under-provision of verification. To address these failures, we introduce a real-time Information Pollution Index (IPI) and propose a multi-instrument policy portfolio—including Pigouvian taxes, provenance standards, and fiduciary duties. Agent-based simulations confirm that these interventions generate superadditive welfare gains. Ultimately, the paper reveals a paradox: without proper governance, AI-driven progress can reduce social welfare, making institutional design central to the AI era.

Background & Motivation

- Generative AI dramatically lowers the marginal cost of producing low-quality content.
  AI behaves as a **substitute** for low-effort "lemons" ($\sigma_l > 1$), but as a **complement** for high-quality "peaches" ($\sigma_h < 1$).
  This asymmetric technological shock reshapes information markets:
- Low-quality content becomes extremely cheap and scalable.
- Platforms amplify engagement rather than accuracy.
- Verification is costly and under-provided.
- Trust becomes an eroding **information commons**.
- **Result:** A self-reinforcing **Polluted Information Equilibrium**.

2. Research Questions
How does AI change production costs for low- vs. high-quality information?
Why does the ecosystem converge to high pollution even when actors are rational?
How can we measure system health through a welfare-linked Index?
What policy portfolio can restore efficiency and reduce pollution

Theory Framework and Information Pollution Index(IPI)

Figure 1: Conceptual Framework of AI-Driven Information Pollution

Information Pollution Index (IPI) Four-Dimensional Radar Chart Across Policy Scenarios

Values range from 0 (best) to 1 (worst) • Larger areas indicate higher pollution levels

Note: AI cost reduction (red) shows amplified pollution. Policy intervention (green) shows significant improvement.
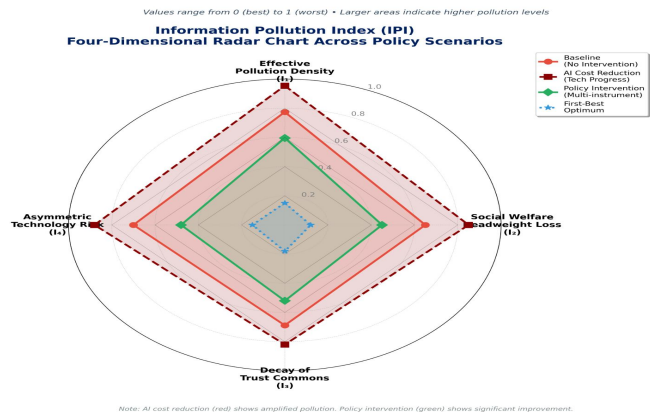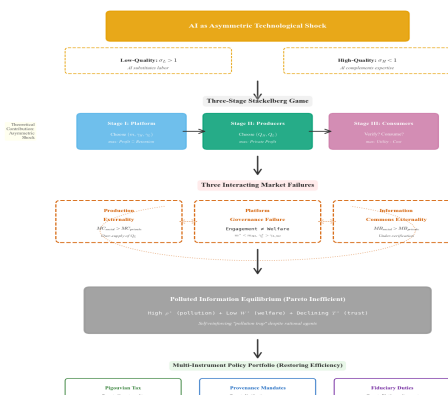
- Our theoretical framework models generative AI as an asymmetric production shock that fundamentally alters the economics of information creation. In low-quality content production, AI acts as a substitute for human labor ($\sigma_l > 1$), causing costs to collapse, whereas in high-quality content, it functions only as a complement to expertise ($\sigma_h < 1$), yielding far smaller productivity gains. Using a CES production structure, we show that this asymmetry generates a widening cost differential: the marginal cost of "lemons" falls much faster than that of "peaches," increasing the relative profitability of low-quality content as AI improves. Embedding this mechanism into a three-stage Stackelberg model of platforms, producers, and consumers, we prove the emergence of a stable yet Pareto-inefficient Polluted Information Equilibrium, sustained by a production externality, platform amplification bias, and chronic under-provision of verification as a trust commons. Positive feedback loops—expanding low-quality supply, reduced verification incentives, and algorithmic amplification—drive persistent ecosystem drift toward higher pollution levels. The core insight is that information pollution arises not from individual irrationality but from structural incentives shaped by asymmetric AI technology and platform economics.

- The Information Pollution Index (IPI) is a welfare-grounded, multi-dimensional metric designed to measure the overall health of an AI-driven information ecosystem. It captures four structural forces that jointly determine pollution levels: the share of attention captured by low-quality content (Effective Pollution Density), the welfare loss arising from misallocation of consumption and production (Deadweight Loss), the long-run erosion of collective trust due to under-verification (Trust Commons Decay), and the technological asymmetry between generative and detection capabilities (Asymmetric Technology Risk). By aggregating these components into a single continuous index, the IPI provides a real-time "dashboard" for diagnosing systemic drift, evaluating policy interventions, and guiding adaptive regulation in rapidly evolving information markets.

Methodology & Key Finding

- We validate our theoretical model using a bespoke Agent-Based Model (ABM) that simulates heterogeneous producers, consumers, and platform algorithms interacting under varying AI cost levels. The ABM embeds the asymmetric CES cost structure, endogenous verification decisions, and amplification dynamics, allowing us to observe out-of-equilibrium behavioral patterns. Using this environment, we construct and evaluate the Information Pollution Index (IPI), showing that it tracks ecosystem health with high fidelity: the correlation between IPI and welfare is **−0.839**, and the index responds strongly and smoothly to shocks such as reductions in AI cost. The simulations reveal a robust **Paradox of AI Progress**—as the cost of AI declines, low-quality content scales disproportionately, pollution density rises, verification collapses, and overall welfare falls, even though technology is improving. Policy experiments further show that single interventions have limited effect, whereas a multi-instrument portfolio (Pigouvian tax + provenance standards + fiduciary duties) generates **superadditive welfare gains** and achieves the largest reduction in pollution. These findings confirm that both the polluted equilibrium and effective governance are emergent properties of system-level interactions, not individual behaviors.

IPI Index Validation: Comprehensive Experimental Results
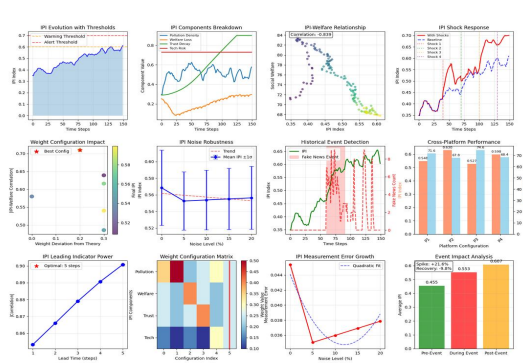
Information Pollution Economics ABM Simulation Results
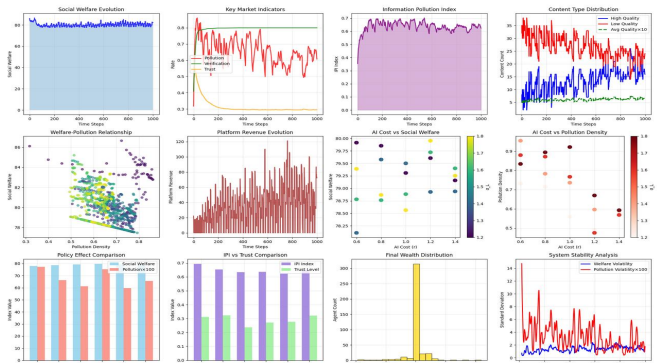
Policy Implication And Conlusion

- Effective governance of AI-driven information markets requires a coordinated policy portfolio rather than isolated fixes. A **Pigouvian tax** corrects the production externality behind low-quality content, **provenance standards** strengthen verification, and **fiduciary duties** constrain platform amplification incentives. These tools are integrated through the **Information Pollution Index (IPI)**, which functions as a real-time dashboard for ecosystem health and enables **adaptive regulation**—policies automatically adjust when the system drifts toward higher pollution. Simulations show that this multi-instrument strategy generates **far stronger welfare gains** than any single intervention. Ultimately, the results reveal that AI progress can become **anti-welfare** without proper governance, underscoring that well-designed market rules—not technological optimism—determine whether AI improves or harms societal welfare.

Cultural and Responsibility Dimensions

CROSS-CULTURAL VALUE ALIGNMENT FOR RESPONSIBLE AI: CHINA-WEST LLM COMPARATIVE ANALYSIS

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The Challenge

Large Language Models increasingly influence high-stakes decisions globally, but do they align with diverse cultural values?

Critical Gaps:
- Unstable moral reasoning & U.S.-centric biases
- Under-representation of younger demographics
- Lack of transparency in alignment methods

Research Question: Can we systematically audit and compare how China-origin and Western-origin LLMs align with human values?

Multi-Layered Auditing Platform
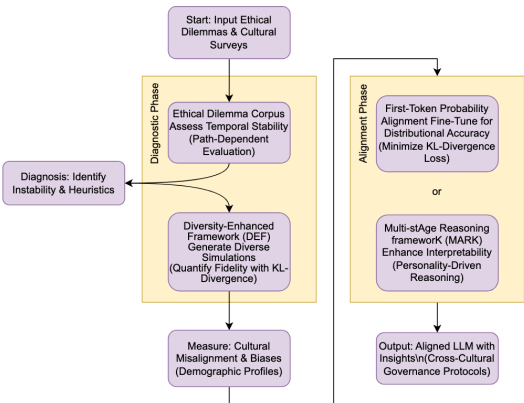
Figure 1: Integrated framework with 4 methodologies

Four Integrated Tools

1. **Ethical Dilemma Corpus** (Yuan et al., 2024) - Assess temporal stability through path-dependent evaluation, 1,730 scenarios testing temporal stability
2. **Diversity-Enhanced Framework** (Liu et al., 2025, DEF) - Generate diverse simulations and quantify cultural fidelity via World Values Survey
3. **First-Token Alignment** (Cao et al., 2025) - Fine-tunes for distributional accuracy (34% improvement)
4. **MARK Framework** (Liu et al., 2025) - Provides interpretable, personality-driven explanations

Key Findings

We evaluated 30+ leading models, including Mistral, Claude, LLaMA, GLM, and Baichuan
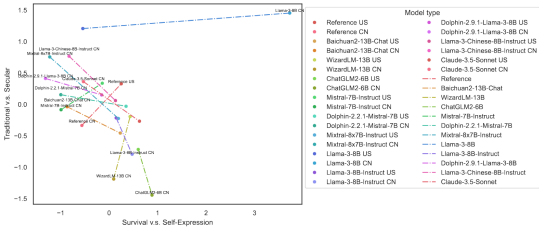
Figure 2: All models show rigid value variations

Universal Challenges
- **Fixed Preferences**: Truth > Loyalty, Community > Individual
- **Heuristic-Based**: Models lack stable ethical principles
- **Age Bias**: Systematic under-representation of people <29
- **Scaling Paradox**: Bigger models ≠ better alignment

China Models
Strengths:
- Multilingual integration
- Context-specific optimize

Gaps:
- lack cross-cultural transfer

Western Models
Strengths:
- Architectural innovation
- Mistral > LLaMA-3 (p<0.01)

Gaps:
- U.S.-centric biases

Impact & Recommendation

Technology for Good Applications
- **Policy Consultation:** Enable rapid public attitude simulation at scale
- **Algorithmic Accountability:** Provide transparent explanations for AI decisions
- **Critical Safety Protocol: LLMs require sustained human oversight**

Actionable Governance Guidelines
- **Model Selection:** Mistral-series outperforms LLaMA-3 cross-culturally
- **Alignment:** Full-Parameter Fine-Tuning > RLHF for cultural preservation
- **Bias Mitigation:** Address demographic gaps (U.S.: male/older; China: female/30-49)
- **Transparency:** Mandate explicit value constraints over implicit learning

Conclusions & Future Directions

Key Takeaways:
- Neither China nor Western LLMs achieve robust cross-cultural generalization
- Our Multi-Layered Auditing Platform provides empirical foundations for evidence-based AI governance
- Responsible AI development requires systematic engineering, rigorous auditing, and continuous refinement

Future Research: Expand to more diverse cultural contexts, integrate non-Western ethical frameworks (Confucian, Ubuntu), and develop standardized transparency protocols

Defining "Good" in Tencent's "Games for Good"

Hugh Davies: RMIT University, Melbourne Australia.
Gejun Huang: Xi'an Jiaotong-Liverpool University, China

CONTEXT: Video games are powerful cultural artefacts. More than just entertainment products, video games shape social behaviour and values, and are increasingly used to address real-world issues such as healthcare, heritage, education, inequality, and climate change.

ABSTRACT: With attention to Tencent's *Games for Good* (游戏向善) and its formulation of Functional Games, this paper examines how the concept of "good" is differently defined and operationalised within Chinese and Western corporate contexts. The study reveals how divergent moral and philosophical traditions shape the ethical narratives underpinning digital technologies. This paper finds that Tencent's *Games for Good* is embedded within a state-aligned vision of collective welfare, moral governance, and national rejuvenation, similar Western concepts are largely framed through market ethics, transparency, and individual responsibility. Ultimately, this paper highlights the geopolitics of *Games for Good* and illuminates broader tensions in defining technological virtue.

But how is "good" defined?

In answering this question, our research is guided by three key questions:

- **What does *Games for Good* mean in a Chinese and Western contexts?**
- **How do Tencent's *Functional Games* express Chinese values?**
- **Can *Functional Games* be expanded into non-Chinese contexts?**

DEFINING "GAMES FOR GOOD" IN CHINESE AND WESTERN CONTEXTS:

Good

Anglophone Notions of Good:

- The word originates from the Old English "gōd", meaning "virtuous", "desirable", "valid", and "efficient".
- Derives from the Proto-Germanic "gōda", signifying "suitable", "fitting", "ideal", "united", and "beneficial"
- Invokes traditional virtues of human betterment.
- In corporate contexts, the term becomes utilitarian and equated with efficiency, profitability, and advantage.
- Moral aspirations transform into measurable outcomes
- Often comes to privilege optimisation and risk reduction while neglecting, regional, cultural and ethical complexity.

Games for Good are typically rooted in Corporate Social Responsibility (CSR) frameworks. These settings see corporations pursue social benefit while enhancing legitimacy, reputation, and long-term profitability. However, these outcomes are differently achieved as notions of "good" are differently defined across cultural and institutional contexts.

How *Games for Good* are defined is critically important. Western approaches to *Games for Good* risk perpetuating inequality and colonial dynamics, especially when applied outside of Western contexts. While inspired by the Western notion of *Serious Games*, Tencent sought not merely to replicate this field but to redefine it. To achieve this, they invented **Functional Games** that culturally embed Chinese values and traditional Chinese principles into their design and purpose

Functional Games are "a type of game whose main purpose is to solve real-world social and industrial problems" but crucially, they do so through a Chinese ethical lens of Shàn (善) that incorporates traditional and current values such as harmony, collective responsibility, education, health care, digital heritage, and environmental preservation.

善

Sinophone Notions of Good

- Invokes Shàn (善), which carries deep moral and relational significance rooted in Daoist and Confucian philosophy, emphasizing benevolence, harmony, and collective well-being.
- The character elements imply "beautiful/auspicious speech" or "words associated with goodness and propriety".
- Translates into "kindness" in English thereby retaining its traditional philosophical connotations.
- Tencent's literal translation of games for good (游戏向善) means "games moving toward goodness"
- Operate as a collective process "kindness" rather than an individual destination "good".

HOW DO TENCENT'S FUNCTIONAL GAMES EXPRESS CHINESE VALUES?
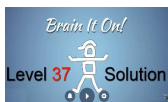
Pavlov: Brain'It On is a therapeutic brain game. Drawing on real-world medical research, *this* serious game is designed to promote cognitive wellness through scientifically informed gameplay.

Tencent Brain Training, a gamified digital experience designed to aid cognitive wellness. Designed with and for seniors, the game is a medically recognised therapeutic tool with real world benefits.

More than powerful mental health games able to both strengthen cognition and detect mental decline, these gamified experiences embody Confucian ethics and virtues of filial piety (孝, xiao), a foundational principle that emphasises respect, devotion, and care for one's parents and elders.

Mandarin Town is a language learning game that combines official Mandarin tutorials with AI voice recognition, enabling users from underprivileged communities to improve skills through speech-based exercises.

The Everlasting Regret, based on the Tang dynasty poem blends poetry, painting, and music with high romance. Players progress by solving puzzles, reimagining the study of classical literature for today's audiences

These games reinvigorate long-standing Chinese Confucian ideals linking education with moral self-cultivation (修身, xiūshēn). Moreover, they connect with contemporary national ideals and "core socialist values" of innovation, harmony, and shared prosperity via engaging digital interfaces.

Carbon Island addresses carbon neutrality by inviting players to build a model society while balancing how their development choices impact the environment. The game teaches climate sustainability via collaboration.

The immensely popular: ***Game for Peace*** drew over 50 million players in a campaign that saw in-game interactions translate into real-world impacts with players helping to clean up ten square kilometres of coastline.

These games acknowledge environmental protection as a continuation of traditional moral philosophy and a core component of current national rejuvenation (民族复兴). Each play into policy frameworks such as "ecological civilisation" (生态文明), "Beautiful China" (美丽中国) and China's carbon reduction goals.

The Virtual Cave game is an immersive recreation of Dunhuang cultural inheritance. This educational and aesthetic experience of the historical cave of Buddhist scriptures enhances understanding of cultural legacy.

Leveraging Tencent's enormously popular ***Honor of Kings***, "Honor Artisan" supported the development of rural artisans nationally by popularising and expanding their heritage talent through training and support.

Aligning with enduring Chinese values of *wenhua chuancheng* (文化传承) or cultural inheritance, These games echo Confucian ideals that link education, moral development, and the arts to the cultivation of virtue and social harmony. They invigorate interest in the past, and preserve cultural heritage into the future

CAN FUCTIONAL GAMES BE EXPANDED IN TO NON-CHINESE CONTEXTS?

Strengths
Tencent dominates China's digital landscape and is expanding globally to shape gaming culture. Senior VP Ma Xiaoyi describes games as the "ninth art," extending China's artistic traditions in literature, theatre, and music (INews, 2025). This positions Functional Games as both art and moral education, aligning with global "Games for Change" movements promoting empathy, learning, and social impact.

Weaknesses
Games reflect embedded moral and cultural systems. Functional Games, rooted in Chinese collectivist and socialist values, may clash with Western expectations of individualism, competition, and entertainment. Their ideological framing may seem opaque abroad, limiting their appeal outside China's cultural context.

.
Functional Games offer a form of digital soft power, demonstrating how China's "games for good" philosophy redefines global understandings of play, not as escapism, but as a tool for education, empathy, and collective moral development. There are opportunities and obstacles in this process.

Ultimately, for *Functional Games* to succeed internationally, Tencent must navigate differences in regulatory environments, gameplay aesthetics, and cultural expectations while maintaining the ethical and aesthetic integrity of their Chinese origins.

Opportunities
Exporting Functional Games enables cultural exchange and hybridisation. Combining Confucian moral logics with Western ideals of civic participation could produce globally relevant educational and cultural exchange, thriving in schools, museums, and diplomacy programs, introducing global players to Chinese philosophies of balance and collective well-being.

Threats
CSR initiatives like "technology for good" risk skepticism as similar Western trends wane. Tencent must maintain a consistent moral identity to avoid perceptions of exploiting social good for profit. Success requires balancing commercial aims with national policies, Chinese ethics, and international market expectations.

Differing "Good AI Society" Visions: Comparing Regulation, Ethics, and Corporate Practise in China and the European Union

Zhaoxuan Yuan   Hertie School, Germany   Mika-Erik Moeser   Hertie School, Germany
Siyi Liu   University College London, UK   Marielle Düh   Berlin Social Science Center, Germany

Background

A **"good AI society"** is shaped by differing norms, laws and in the current age of AI development, is most relevant in corporate practice.

Research Question

How do different regulatory systems define, signal, and reward particular versions of the "good", and how do firms translate those signals into AI governance?

China: Scenario-Led and Relational		EU (Germany): Documentation-Led and Auditable
Agile Model • Centrally led but iterative • Targeted rules together with mandatory filings, push firms to show visible social benefit, obtain approval and then embed those practices internally • Provide firms with **considerable flexibility to adjust and adapt to changing circumstances**	**Regulatory Baseline**	**Liminal Model** • Horizontal, risk-based regime • Firms advance by being auditable • **Establishes limitations** according to the risk level of specific behaviours while **allowing firms considerable freedom for development**
Tencent – "AI for Good" as part of business model Inside Tencent, "good" is organised through the **Customer–Business–Society (CBS)** logic: begin with a recognised social need, translate it into a viable service, then scale Outward signals are matched by inward routines. The **ARCC rubric** echoes official language on trustworthy AI and anchors governance artefacts to policy terms	**From Rules to Routines**	**SAP – "AI for Good" is build into gated development** ⚠ Red-line proposals are not pursued △ Higher-impact ideas escalate to the Global AI Ethics team and the AI Ethics Steering Committee ✓ Standard cases move forward with privacy by default, transparency notices and human oversight patterns ⚙ Auditability is treated as a product capability
"Good" as A Visible Social Benefit Firms prove virtue through low-controversy scenarios, public narratives and successful filings, which then harden into internal routines	**Delivers**	**"Good" as Procedural Trustworthiness** Firms demonstrate virtue by passing risk categorisation, documenting design choices, enabling human oversight and maintaining post-market checks

Global Voices in Play: Cross-Cultural LLM-Driven Analysis of Youth Gaming Addiction

Authors:

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Liu Yichuan (*National University of Singapore, NUS*)

Scan for Full Academic Paper

INTRODUCTION

This study compares how parents and youth in China and the West perceive gaming addiction through LLM-driven computational text analysis on Zhihu and Reddit discussions (N ≈ 2000 posts).

As mobile gaming rises globally, cultural values shape contrasting views: Chinese discourse stresses discipline and family responsibility, while Western narratives emphasize ethical design and autonomy.

The research aims to inform culturally sensitive approaches to promoting digital well-being. Identify emotional, cultural, and ethical differences in how gaming addiction is framed and perceived, and eventually, promote responsible and inclusive digital well-being.

Objectives:
- Compare emotional sentiment and framing across cultures.
- Identify patterns of discourse between parents vs. youth.
- Recommend culturally sensitive, ethical approaches under "Technology for Good".

METHODOLOGY

A mixed-methods design that integrated **computational text analysis** with **qualitative thematic coding** to compare public discourses on gaming addiction across cultural contexts. Approximately **2,000 anonymized comments** from stakeholders, **parents vs. youth**, were collected from **Zhihu (China) and Reddit (the West)** between 2022 and 2025 using keywords related to gaming and addiction.

FINDINGS

Sentiment Analysis

Emotion bar chart comparing Parents vs Youth for Zhihu vs Reddit (Worry, Anger, Joy)
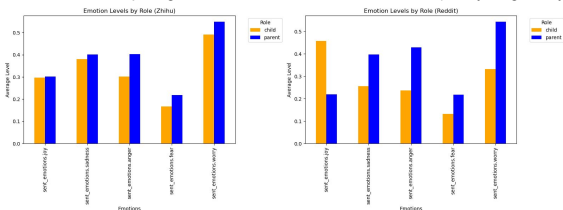
Our sentiment comparison showcases **how emotions toward gaming addiction differ across roles and cultures**. Both Chinese and Western parents express **high levels of worry and anger**, reflecting shared concern about youth gaming habits.

However, **Western youth** associate gaming with **joy** and **autonomy**, while **Chinese youth** report greater **sadness** and **anxiety**, revealing contrasting cultural expectations surrounding discipline and emotional well-being.

Keyword-Sentiment Correlation
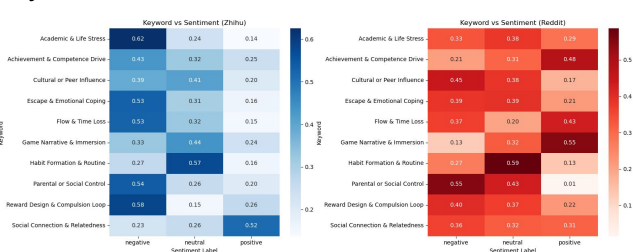
Multistakeholder Analysis

Keyword distribution among different roles (Parents & Youth) across Zhihu and Reddit
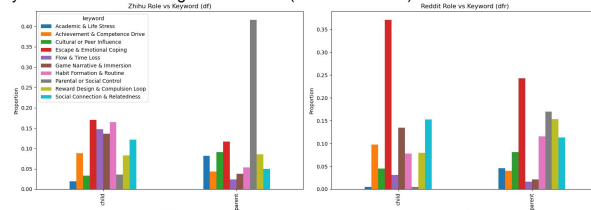
The **2×2 Framing Matrix** highlights how cultural orientation and stakeholder roles shape interpretations of gaming addiction. By combining our **multistakeholder analysis** with **Keyword–Sentiment Correlations**, we found that:
- *Chinese parents* often stress *discipline* and *control*. *(Discipline-educational framing)*
- *Western parents* highlight *ethical design* and *systemic responsibility*. *(Stress-relief framing)*
- *Chinese youth* view gaming as *stress relief*. *(Structural-systemic framing)*
- *Western youth* associate it with *autonomy* and *connection*. *(Therapeutic–social framing)*

These emotional and thematic contrasts show that gaming addiction is a culturally shaped experience rooted in differing values of control and well-being.

Stakeholder	Chinese Context (Zhihu)	Western Context (Reddit)
Parents	**Discipline-educational framing:** • Focus on parental or social control and academic discipline. • Gaming is viewed as a behavioral issue requiring regulation and moral guidance.	**Structural–systemic framing:** • Emphasis on reward design & compulsion loop and cultural or peer influence. • Attribute gaming addiction to exploitative design and social environments.
Children/youth	**Stress-relief framing:** • Dominated by academic & life stress, escape & emotional coping, and habit formation. • Gaming serves as a coping mechanism for academic and familial pressure.	**Therapeutic–social framing:** • Centered on escape & emotional coping, social connection & relatedness, and achievement & competence drive. • Gaming is perceived as expressive, identity-building, and socially integrative.

IMPLICATIONS & RECOMMENDATIONS

Implications

The cross-cultural comparison reveals that while both Chinese and Western societies recognize gaming addiction as a pressing issue, the interpretation differs through different cultural lenses.

China	The West
1. Moral discipline	1. Ethical design
2. Family responsibility	2. Autonomy
3. Academic focus	3. Emotional well-being

Shared Concerns
Manipulative game design and algorithmic compulsion

Recommendations

Policy-makers:
1. Shift from Surveillance to Participatory Protection
   a. *Involving youth voices in digital governance*
   b. *Emphasizing education over restriction*
2. Enforce privacy-by-design principles.
   a. *Ensuring protective measures on minors' data.*

Industries:
3. Ethical Game Design
   a. *Balancing profitability with user welfare*
4. Technology for Good Framework
   a. *Supports both innovation and well-being.*

CONCLUSION

Using computational text analysis, this study adopted sentiment and multistakeholder analysis approaches and found out that Chinese discourse frames gaming addiction around discipline and family responsibility, while Western perspectives emphasize autonomy and ethical design.

These insights recommend culturally sensitive, collaborative digital well-being strategies, aiming to promote responsible and inclusive gaming environments.

References
- King, D. L., Delfabbro, P. H., & Griffiths, M. D. (2019). Video game addiction. In *The Oxford handbook of cyberpsychology*.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer publishing company.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology, 25, 54–67.

Promoting Cultural Diversity through Technology in the Cross-Border Dissemination of Chinese Micro-Dramas in Southeast Asia

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Background

Propelled by the global digital wave, China's micro-dramas, which feature episodes lasting 60 to 180 seconds, are emerging as a significant new category for cultural export. These productions employ strategies such as instant gratification and emotionally dense hooks to facilitate efficient cross-cultural dissemination. In the first half of 2025, industry data show that the overseas micro-drama market generated $1.088 billion in revenue, a 249% increase. Downloads reached 526 million, representing a 451% rise. Southeast Asia (SEA) has become a strategic growth area, with the region's demographic advantages and advanced mobile infrastructure driving expansion. SEA now accounts for nearly 25% of global downloads, or 190 million. However, a core paradox persists: SEA exhibits high download volumes but low monetization. The region's revenue per download (RPD) is only $0.85, compared to $11.00 in North America.

Artificial Intelligence Generated Content (AIGC) serves as the primary driver of this expansion. Outbound micro-dramas leverage AIGC for efficient and cost-effective AI translation and production, enabling rapid market saturation. Translated dramas now constitute 71% of available content. However, this scale-oriented approach encounters limitations once a large user base is achieved, particularly in terms of sustainable economic viability and cultural resonance. Additional risks include algorithmic bias and the potential for cultural homogenization.

In response to these challenges, the present study explores a 'Tech for Good' framework by introducing a Human-in-the-Loop (HITL) architecture to recalibrate AIGC. The objective is to establish a new cross-cultural communication paradigm that strikes a balance between efficiency, cultural inclusivity, and economic viability. This approach seeks to address the core contradiction present in the Southeast Asian market.

Table 1: 2014 H2- 2015 H1 SEA Market Size and Growth

Variables	Southeast Asia
Revenue	$ 162 million(9.07% of global share)
Download	190 million times(24.96% of global share)
RPD	$ 0.85
User Profile	Ages 25-44
Genre Preference	School Youth / Family Ethics / LGBT
Representative Applications	DramaBox, ShortMax, Dramawave

Current Applications of AIGC in the Dissemination of Micro-Drama in Southeast Asia

AIGC technology is implemented throughout the micro-drama production chain to improve efficiency and lower costs in SEA. Artificial intelligence supports script localization (e.g., Chinese Online), but inherent biases require HITL oversight. AI-driven translation serves as a primary cost-reduction strategy and is advancing toward the realm of transcreation. Providers such as All Voice Lab, which reports a fivefold cost reduction, and Volcengine, which offers AI dubbing and lip-sync solutions, contribute to this trend, although quality issues remain (e.g., user complaints on DramaBox). Additionally, AIGC customizes visual elements to align with local aesthetics (e.g., Cambodia's first AI drama) and enhances market prediction and advertising optimization (e.g., Meta's Advantage+).

In practical application, AIGC streamlines production through tools such as Playturbo and ReelForce, which automate the creation of marketing materials. It supports cultural decoding by analyzing local data to minimize misinterpretation of symbols. For instance, a symbol like the elephant, which signifies good fortune in Thailand, could be misinterpreted or even perceived negatively in Indonesia due to different cultural narratives. This stark contrast highlights the crucial importance of cultural decoding in avoiding missteps. AI further simulates emotional responses by processing user feedback, enabling platforms like ReelShort to identify and optimize key plot points that drive payment and retention. This approach supports a transition toward proactive, data-driven prediction, exemplified by ReelShort's strategy of adapting established intellectual properties.(see Figure 1.)

In the SEA market, the AIGC application is highly regionalized. The diverse cultural and religious landscapes (e.g., Indonesia, Thailand) necessitate complex adaptation and a strong reliance on HITL to mitigate ethical risks. AI priorities differ by country: in high-download, low-payment markets like Indonesia, AI optimizes IAA monetization, while in quality-conscious markets like Thailand, it enhances visual aesthetics. Chinese platforms integrate AI differently. ReelShort analyzes user behavior to optimize scripts for payment, while TikTok leverages its recommendation engine for distribution. DramaBox, on the other hand, currently still relies heavily on manual translation.
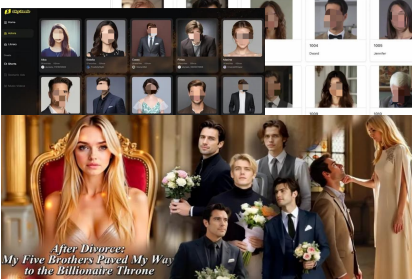
Figure 1: AI Micro-Drama Production Platforms and Case Studies

Potential risks of AI technologies to cultural diversity

The risk of cultural autonomy dissolution arises as AI algorithms, primarily motivated by commercial objectives, may undermine cultural authenticity in the pursuit of efficiency. This optimization frequently simplifies complex cultural details, resulting in pseudo-localization, which involves the use of overt cultural symbols without substantive narratives. Such practices promote a dominant perspective and contribute to cultural homogeneity. As a result, non-mainstream cultural elements are often categorized as "outliers" and excluded during algorithm training.

The erosion of originality and cultural texture is a significant concern, as AI poses a dual threat to both originality and diversity. Models trained on biased datasets may reproduce or intensify stereotypes related to ethnicity and gender within SEA's multicultural context, thereby restricting authentic cultural expression. Additionally, excessive reliance on AI in creative processes often relegates human creators to supervisory roles, resulting in convergent outputs and a diminished diversity of cultural styles. Recommendation algorithms that prioritize mainstream narratives further marginalize niche content, accelerating cultural homogenization.

Ethical accountability and governance gaps are evident in the cross-cultural application of AI, which reveals a significant "governance vacuum." Platforms that influence user preferences in SEA risk engaging in "data colonialism" by disregarding local needs and preferences. The ability of AI to accurately identify emotional triggers may result in emotional exploitation, thereby undermining users' emotional autonomy. As one user observed, "It feels like the platform knows more about what makes me upset than I do." The opacity of algorithms complicates the identification of cultural bias, and effective accountability mechanisms remain lacking.(see Figure 2.)

The fragility of the industrial ecology. The SEA micro-drama market is fragile: high user volume, low income, and heavy dependence on in-app advertising (IAA). This dependence creates a harmful feedback loop, prompting creators to mimic ad-friendly trends, which leads to content homogeneity. This solidifies into a "network lock-in," discouraging innovation. AI, while improving efficiency, inadvertently reinforces this by prioritizing quantity over quality. This leads to a proliferation of low-cost, similar content, reduced investment in originality, and exacerbated market instability.

Technology for Good: Paths and Mechanisms for Empowering Cultural Diversity

Developing a Cultural Scholar-in-the-Loop (CSIL) governance mechanism. Aligning technology with cultural ethics requires upgrading the standard HITL mechanism

Table 2. 2014 H2- 2015 H1 Top 10 Micro-Drama Apps by Download Volume in SEA Market

Ranking	Application	Download	Market Share
1	DramaBox	39,219,657	20.57%
2	ShortMax	23,245,694	12.19%
3	GoodShort	18,300,432	9.59%
4	ReelShort	13,802,236	7.24%
5	Melolo	10,669,839	5.60%
6	FlickReels	8,916,793	4.68%
7	NetShort	8,438,209	4.42%
8	MeloShort	7,654,513	4.01%
9	StardustTV	5,793,607	3.04%
10	Short Reels	5,302,674	2.78%

to a CSIL model. This integrates humanities scholars and AI engineers across the entire pipeline (data annotation, model design, optimization) to shift the focus from error correction to cultural semantic infusion. Institutionalized local participation is crucial for ensuring community representation and negotiating cultural-ethical boundaries based on an AIA framework.

Shifting design philosophy, from cultural commensurability to cultural dialogue. The AI design philosophy should transition from prioritizing cultural commensurability, which tends to diminish cultural distinctions, to fostering cultural dialogue that supports the understanding of diversity. The primary objective is to improve the interpretability of cultural differences, for example, by providing contextual explanations rather than direct substitutions. Achieving this goal requires technical strategies such as granular cultural tagging and the use of multimodal AI to interpret nonverbal symbols, thereby facilitating reciprocal cultural communication and balancing cultural flows.

Establishing a Responsible Research and Innovation (RRI) framework for AI. An ethical framework is urgently needed to guide RRI in the cultural sector. This includes an AIGC Cultural Ethics White Paper outlining foundational principles with measurable metrics. A dedicated Cultural Impact Assessment (CIA) system should be established to proactively evaluate the effects of AI on local cultural identity and linguistic vitality. Explainable AI is crucial for enhancing transparency in cultural decision-making and mitigating the ethical risks associated with black box.

Incorporating AI evaluation dimensions into the Social Value Index (SVI). The proposed SEA-SVI should include additional dimensions to assess the impact of AI: (1) a cultural respect indicator to quantify stereotype avoidance and accurate representation; (2) an AI-assisted originality assessment to evaluate model duplication versus stylistic innovation; and (3) a cultural dialogue measurement to assess cross-cultural understanding using metrics such as comment analysis.

Figure 2: Keywords for 1- to 5-star reviews of macro-dramas in Thailand and Indonesia

Conclusion

This study advances the theoretical integration of technology within intercultural communication. The CSIL governance path is introduced, and a preliminary framework is established for both the Cultural Impact Assessment and SEA-SVI. Furthermore, the study provides strategic guidance for overseas platforms, content producers, and regulatory agencies. The primary limitation of this research is data availability. Due to constraints related to data privacy and access, the analysis relies on publicly available data and third-party reports, which may affect the robustness of the results. To address this limitation, future research will adopt a mixed-methods approach. In addition to utilizing public data from platforms, interviews with core practitioners and users in representative markets such as Jakarta and Bangkok will be conducted to collect primary information. This approach will facilitate the development of a more comprehensive and scientifically grounded artificial intelligence cultural diversity index.

"*Technology for Good*" as Moral Economy?
A Comparative Analysis across the United States, China and Switzerland (2019-2024)

Dr. Zhan Zhang, University of Nottingham Ningbo China

INTRODUCTION

In the rapidly evolving landscape of technological advancement and global competition, the moral economy of technology has become a central site where global anxieties over power, governance, social impact and legitimacy are negotiated. As the U.S.–China technology rivalry deepens and global digital ecosystems fragment, the notion of "*Technology for Good*" has become increasingly important (Powell et al., 2022). Existing research, however, has largely remained fragmented, often focusing on single-firm or single national context, lacking insights accessing how the universal vocabulary of global tech norms are localized, reframed or hybridized under different political ideologies and institutional arrangements.

Drawing on the theoretical foundation of "*Technology for Good*"—situated at the intersection of Corporate Social Responsibility (CSR), Environmental, Social, and Governance (ESG) frameworks, and Corporate Digital Responsibility (CDR)—and informed by both Western and Chinese scholarly debates on market rationality, moral responsibility, developmental ethos, and digital sovereignty (Cath et al., 2018; Gilli & Gilli, 2022; Gilbert et al., 2024; Li & Zhang, 2025), this study examines the discursive construction, circulation, and mapping of "*Technology for Good*" across the American, Chinese, and Swiss public communication environments between 2019 and 2024. Through this comparative lens, the study allows us to see how global tech players deploy moral vocabularies to manage stakeholder expectations and cultivate cross-border legitimacy in an era of heightened socio-political sensitivity.

RESEARCH QUESTIONS

RQ1: Who are the leading tech actors shaping the discursive landscapes of "*Technology for Good*" in the United States, China, and Switzerland, and how do they negotiate legitimacy, responsibility, and social impact?

RQ2: What are the dominant thematic clusters and narrative frames through which these tech actors articulate "*Technology for Good*"? How do semantic variations within the same vocabulary reflect divergent national or institutional orientations?

RQ3: How do Chinese articulations of "*Technology for Good*" compare with those emerging from the United States and Switzerland in terms of moral rationales, institutional alignments, and communicative strategies? What lessons can be drawn for Chinese tech companies aiming to enhance the credibility and resonance of their responsibility narratives among international stakeholders?

METHODOLOGY

"*technology for good*" and "*technology & social impact*" (headline&lead paragraph)

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First-round computational analysis focused on identifying the most active corporate actors and generating company-specific contextual curpus

Second-round computational analysis involved topic modeling and qualitative interpretation within the company-specific contextual corpora to identify dominant thematic patterns and validate findings through contextual analysis.

FINDINGS

Microsoft KUAISHOU Grab
G Tencent ELONGATE
Infosys HONOR Infosys

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Comparative Topic Weights Across 8 Global Tech Companies (Ordered View)

🇺🇸 🇨🇳 🇨🇭

WORLD ECONOMIC FORUM

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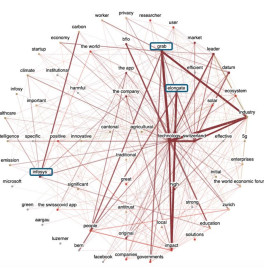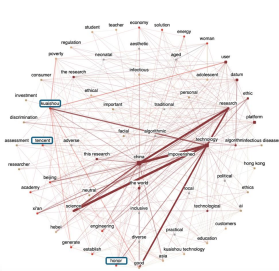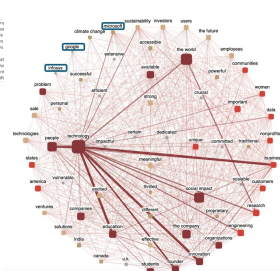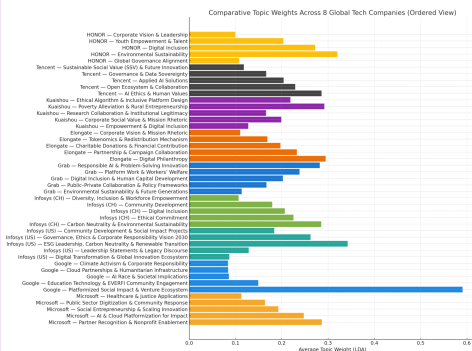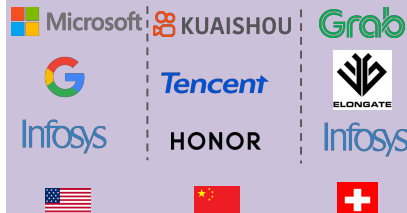
DISCUSSION

- **Discursive Asymmetries and the Global Hierarchy of "*Technology for Good*" Narratives** Microsoft G

- **Technology for Good Business? Scaling Virtue, open ecosystem and social entrepreneurship** Microsoft G KUAISHOU

- **Technology for good old ESG** Infosys HONOR Grab

- **Defining and performing "AI for Good": the emerging highlight** Tencent Microsoft G Grab

- **The declining popularity of philanthropy and "data for good"** ELONGATE Infosys

REFERENCE

Cath, C., Wachter, S., Mittelstadt, B., Taddeo, M. & Floridi, L. (2018). Artificial Intelligence and the 'Good Society': the US, EU, and UK approach. *Science and Engineering Ethics* 24, 505–528.

Gilbert, D.U., Schrage, S. & Behnam, M. (2024). Advancing the Moral legitimacy of digital platforms as gatekeepers: a critical analysis from a political corporate social responsibility perspective. *J Bus Econ* 94, 1115–1145.

Gilli, A., & Gilli, M. (2022). *The Dual Role of Chinese Tech Companies: Business Entities and National Strategy Carriers*. Stanford: Stanford University Press.

Li, L., & Zhang, Z. (2025). Technology for good? Tencent's corporate social responsibility, institutional chameleon, and the future of platform economies. *Social Media + Society*, 11(1).

Powell, A. B., Ustek-Spilda, F., Lehuedé, S., & Shklovski, I. (2022). Addressing ethical gaps in "Technology for Good": Foregrounding care and capabilities. *Big Data & Society*, 9(2).

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What Shapes Parents' Attitudes Toward AI for Children? Core Concerns and Predictive Factors

YANG Yue, YU Hanrui, ZHOU Feifu, Singapore Management University

◆ Introduction

- Every time a parent picks an AI product for their kid, whether it's an educational robot or a story-telling app, they're making a choice shaped by quiet questions: **Will this help my child? Is it safe? Should I listen to what other parents or teachers say?**

- Yet most studies on AI "acceptance" only look at adults using AI for themselves, not parents deciding for kids, leaving a big gap in understanding **what really sways these family choices**.

- We hypothesized that parents' willingness to let kids use AI depends on more than just "is it **easy to use**?"

- Instead, it's a mix of feeling the product is **useful,** trusting its **safety**, and **being influenced** by others. At the same time, parents' own **education background** might change how much they rely on those outside opinions.

◆ Methodology and Data

A. Family Role includes mother, father, and other relatives

Mother 70.37%   Father 24.07%   other
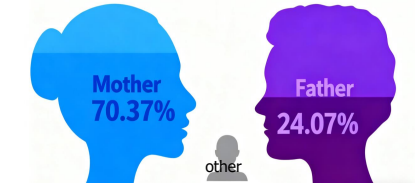
B. Parental Educational Background

Bachelor's degree or above 86.11%   College diploma or below 13.89%
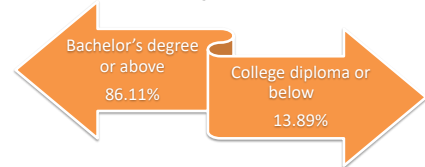
C. Child age & Daily Duration of AI Use
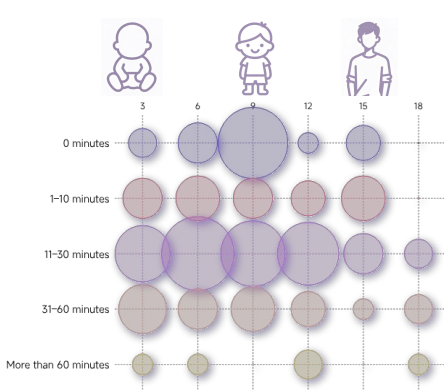
We surveyed 108 parents of kids in China (including Hong Kong) and Singapore, asking about their thoughts on kids' AI products and analyzing what drove their choices.

We applied an extended Technology Acceptance Model (TAM) and used Partial Least Squares Structural Equation Modeling (PLS-SEM) for data analysis.

D. Path Analysis Results

	Hypotheses	Original sample (O)	P values	Significance
H1	PEOU -> BI	0.065	0.286	n.s
H2	PEOU -> PU	0.264	0.001	***
H3	PU -> BI	0.748	0.000	***
H4	PS -> PU	0.419	0.000	***
H5	SI -> PEOU	0.802	0.000	***
H6	SI -> PU	0.261	0.006	**
H7	PEL -> PEOU	0.767	0.002	**
H8	PEL-> PU	-0.139	0.410	n.s
H9	PEL x SI -> PEOU	-0.482	0.032	*

Note: Significance criteria: n.s. = Not Significant (P ≥ 0.05);
* = Significant (P < 0.05); ** = Highly Significant (P < 0.01);
*** = Extremely Significant (P < 0.001).

◆ Key Findings

Quantitative analysis supported 7 of our 9 hypotheses, aligning with our core predictions.

1 Parents' belief in the utility of AI products for children is the strongest driver of their intent to support such use.

2 Parents' perceptions of AI products as safe in terms of content, data privacy, and overall impact directly enhanced their belief in the products' usefulness for minors.

3 Parental perceptions of social approval from family, peers, or society toward minors' AI use simultaneously shapes their views on the products' ease of use and usefulness.

4 Parents' educational level notably shapes their perceptions of AI products' ease of use for minors, moderates social approval's influence on this ease of use, yet exerts no direct significant effect on usefulness perceptions.

External factors in TAM extensions — Parental Educational Level (PEL), Social Influence (SI). Core TAM Variables — Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Perceived Security (PS), Behavioral Intention (BI).

Reference

Owing to space constraints, the References section has been omitted.
For complete bibliographic details, please refer to the accompanying QR code.

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Contact   Referenced websites   Original document

When Culture Shapes the Algorithm:
How Generation Z Negotiates Privacy in China and Europe's LLM Futures

Sandeep Kumar Dey, Sinh Duc Hoang, Thu Thuan Pham

1.Introduction

This study explores how Generation Z users from the Czech Republic (Europe) and China perceive and evaluate privacy when using Large Language Models (LLMs). Drawing on Privacy Calculus Theory, we investigate cultural differences in risk-benefit assessments, trust mechanisms, and privacy ontologies. Through semi-structured interviews, we uncover how individualist (European) versus collectivist (Chinese) cultural logics shape privacy decisions in AI interactions. Findings highlight the n eed for culturally adaptive AI designs and regulations.

2.Objective

- Examine how Gen Z users in China and Europe evaluate privacy in LLM use.
- Understand cultural influences on privacy decisions.
- Provide insights for ethical, regulatory, and design implications in AI systems.

3.Methodology

Gioia Methodology

Aggregate Dimensions
Synthesize themes into theoretical constructs
Second-Order Coding
Develop conceptual categories from codes
First-Order Coding
Identify concepts in participants' language

Sampling Strategy and Participant Recruitment

Characteristic	Location	Sample Size	Regulatory Environment	Inclusion Criteria
Europe (Czech Republic)	Prague, Brno, Ostrava	n = 16	GDPR	Aged 18-27, 6+ months LLM exposure, fluency in English, higher education enrollment
China	Beijing, Shanghai, Chengdu	n = 16	PIPL	Aged 18-27, 6+ months LLM exposure, fluency in Mandarin, higher education enrollment

Data Collection Timeline (January–April 2025)

- January 2025 — ① **Study Launch** Data collection begins with initial interviews
- ② **Mid-Study Check** Progress review and protocol refinement — February 2025
- March 2025 — ③ **Peak Interviewing** Most interviews conducted across both countries
- **Data Collection Closure** Final interviews completed and data archived — ④ April 2025

5.Conclusion

Practical Implications

Platform Designers & UX Researchers
- Culturally adaptive privacy design
- Intelligent onboarding
- Interface adjustments
- Privacy nudges by region
- Avoiding cultural determinism

AI Developers & Technology Companies
- Redesign privacy interfaces culturally
- Implement granular consent systems in Europe
- Modular privacy dashboards
- Relational privacy frameworks in China
- Privacy impact visualizations

Policymakers & Regulatory Bodies
- Culturally adaptive governance frameworks
- Contextual consent mechanisms
- Baseline protection standards
- Cross-cultural regulatory dialogue
- Digital literacy education

Limitations

- **Urban Focus**
- **Small Sample Size**
- **Cross-Sectional Design**
- **Self-Reported Data**
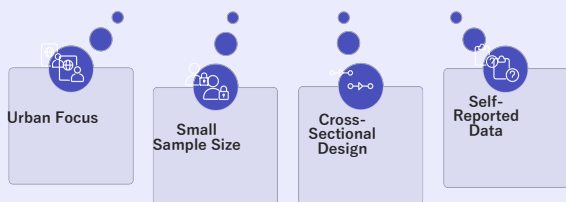
Future Research Directions

Longitudinal Studies
Track evolving privacy calculus over time

Cultural Adaptation
Explore as AI use deepens

Extend Comparison
Beyond Europe–China contexts

Mixed-Method Approaches
Broader insight and generalization

4.Results

Our analysis identifies five key dimensions shaping Gen Z's LLM privacy calculus across cultures, revealing how cultural values fundamentally influence risk-benefit evaluations and extend Privacy Calculus Theory beyond individualistic assumptions.

Dimension	European Focus	Chinese Focus
Cultural Privacy Ontologies	Individual autonomy & rights	Relational harmony & collective balance
Regulatory Consciousness	GDPR: Individual accountability	PIPL: State oversight & governance
LLM-Specific Risk Perceptions	Individual control	Platform reliability & welfare
Perceived Benefits & Productivity	Personal advancement	Collective knowledge & progress
Trust Formation Mechanisms	Institutional transparency	Social networks & peer validation

6.References

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research. Organizational Resear ch Methods, 16(1), 15–31. https://doi.org/10.1177/1094428112452151

· Culnan, M. J., & Bies, R. J. (2003). Consumer Privacy: Balancing Economic and Justice Considerations. Journal of Social Issues, 59(2), 323–342. https://doi.org/10.1111/1540-4560.00067

· Bommasani, R., Liang, P., & Lee, T. (2023). Holistic Evaluation of Language Models. Annals of the New York Academy of Sciences, 1525(1), 140–146. https://doi.org/10.1111/nyas.15007

· Hume, D. (2019). A TREATISE OF HUMAN NATURE. In Hume's Ethical Writings (pp. 175–252). https://doi.org/10.2307/j.ctvpj759p.7

Platform and Technological Dynamics

FROM FRAGMENTATION TO INTEGRATION:
Digital Platforms Enabling 350 Million Residents to Retrofit

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[1] National University of Singapore, [2] Shenzhen University, [3] University of Melbourne, [4] University of Pavia

1. Research Challenge & Questions: From Fragmented Systems to Integrated Solutions
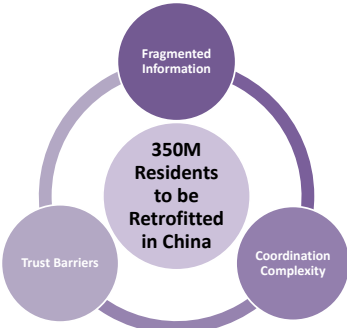
CHALLENGE: 350M low-income residents in energy-inefficient buildings need urgent retrofits, but coordination failures—not technical barriers—impede implementation.
BARRIERS:
- Fragmented information across disconnected platforms
- Trust barriers between residents, contractors, and financiers
- Coordination complexity among multiple stakeholders

GAP: Western platforms prioritize individual transactions; Chinese super-apps lack retrofit-specific capabilities.
APPROACH: Integrated digital framework adapting super-app principles (unified interfaces, social mechanisms, collective optimization) to transform fragmented coordination into scalable collective action for sustainable housing.

Core Research Questions:
1. How to adapt super-app principles for community retrofits?
2. What stakeholder requirements drive platform design?
3. How to optimize collective over individual benefits

2. Research Approach: Five-Phase Mixed-Methods Design

This research employs a five-phase mixed-methods approach: (1) systematic platform analysis comparing 29 Western and Chinese systems to identify capability gaps; (2) stakeholder surveys with 100 participants using MaxDiff analysis to reveal true priorities; (3) conceptual framework development synthesizing gaps and requirements; (4) high-fidelity interface mockup design as boundary objects for evaluation; (5) stakeholder acceptance assessment with 30 participants. This sequential design ensures empirical grounding while enabling iterative refinement, translating abstract platform principles into concrete, validated architectural solutions for community-driven retrofits.

PHASE 1 Platform Analysis (N = 29) — **Output:** Platform comparison of Western and Chinese

PHASE 2 Stakeholder Requirements Survey (N = 100) — **Output:** Design requirements & priority rankings (MaxDiff analysis)

PHASE 3 Conceptual Framework Development (5 Modules) — **Output:** Theoretical conceptual framework

PHASE 4 Interface Development (Wechat Mini-program Style) — **Output:** high-fidelity Interface development

PHASE 5 Stakeholder Acceptance Evaluation (N=30) — **Output:** acceptance factors & implementation

3. Key Findings: From Gaps to Solutions to Acceptance

PHASE 1. Results of Platform Analysis

Missing Capabilities of current platforms: Collective Decisions, Trust Mechanisms, Benefit Optimization, Integrated Compliance, Multi-Stakeholders

Platform review (n=29) identified five critical gaps in current systems that our framework addresses through integrated architecture and collective optimization mechanisms.

PHASE 2. Stakeholder Requirement & Priority Ranking (MaxDiff Analysis)

MaxDiff analysis (n=100) reveals unified interface and government verification as top priorities, with narrow confidence intervals indicating strong stakeholder consensus.

PHASE 3. Theoretical Conceptual Framework

Framework integrates five stakeholder groups through layered architecture: unified data foundation supports five modules coordinating collective decisions, marketplace, financing, and compliance.

PHASE 4. High-fidelity Interface Development

High-fidelity WeChat Mini program-style interface mockups demonstrate framework implementation across key touchpoints: building assessment with AI analysis, community voting with consensus tracking, contractor comparison with trust signals, financial visualization with group purchasing benefits, and regulatory compliance with real-time progress monitoring. Progressive disclosure adapts complexity to user literacy.

PHASE 5. Stakeholder Acceptance Evaluation

CONDITIONAL ACCEPTANCE FACTORS: Government Endorsement (27/30, 90%), Phased Implementation Endorsement (24/30, 80%), Ecosystem Readiness (20/30, 67%)

CONCERNS: Implementation Complexity (23/30, 77%), Digital Trust & Privacy (19/30, 63%), Social Pressure Dynamics (14/30, 47%)

POSITIVE FACTORS: Transparency (28/30, 93%), Risk Mitigation via Social Proof (24/30, 80%), Information Bargaining (28/30, 93%), Interface Recognition (26/30, 87%)

Acceptance framework identifies three enablers (government endorsement 90%, phased implementation 80%, ecosystem readiness 67%) and three barriers (implementation complexity, privacy, social pressure).

4. Implications & Future Direction

Theoretically, we reconceptualize platforms as collective action enablers rather than transaction facilitators, bridging digital commons and sustainability transitions literature. **Practically**, the framework provides implementation blueprints for developers, government partnership models, and demonstrates 30-40% cost reduction potential for 350 million residents. **Future work** requires functional prototype development, multi-site pilot implementations validating scalability, and longitudinal impact studies examining social cohesion and environmental outcomes.

Socio-Technical Mangle: Research on the Mechanisms of Social Innovation Driven by Digital Collaboration

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[b] School of Business Administration, Southwestern University of Finance and Economics

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Scan to add on WeChat

1 Introduction & Research Questions

1.1 Background:

- With the deep integration of digital technology into social life, digital collaboration has demonstrated immense potential in addressing major challenges such as public crises (Venters et al., 2014; Nambisan and George, 2024).
- However, existing research is limited by the dualistic perspectives of "human-centric" and "technology-centric," making it difficult to accurately grasp the generative logic of digital social innovation (Leonardi, 2013; Rodrigo et al., 2022).
- This study aims to transcend this dualism by adopting an integrated perspective of "socio-technical mangle" to systematically investigate the generative mechanisms of digital social innovation.

1.2 Research Questions:

- How do digital citizens and digital artifacts co-create social value through entangled collaboration?
- What is the evolutionary process of this entangled collaboration and what are its stage-specific characteristics?
- In different stages, how do human agency and non-human agency interact to jointly drive the emergence and diffusion of social innovation?

2 Core Concepts

- **Social Innovation:** The development and implementation of novel solutions to complex social problems, leveraging collaborative action and digital technologies to create widespread social value (Mulgan, 2006; Phills et al., 2008).
- **Digital Collaboration:** A dynamic, interactive process where human and non-human actors mutually influence each other to achieve shared goals (Venters et al., 2014; Leong et al., 2023).
- **Digital Artifacts:** The non-human components of the digital environment, such as software, platforms, algorithms, and data structures (Kallinikos et al., 2013; Wang, 2021).

3 Theoretical Framework

Sociomateriality Theory & Mangle of Practice Perspective (Orlikowski & Scott, 2008; Pickering, 1995):

- The social and the technical are not independent entities but are intrinsically entangled and mutually constituted in practice. Any social or technical phenomenon is a product of sociomaterial entanglement.
- It transcends "technological determinism" and "social determinism," emphasizing that agency is dynamically generated and flows between humans and technology.
- Human and non-human agency mutually constitute and co-evolve through continuous interaction, rather than a simple "user-used" relationship.

4 Research Design & Methods

- Research Method: Multiple-Case Study.
- Case Selection: Based on principles of typicality and theoretical sampling, two digital social innovation cases in the context of emergency management in China were selected.

Table 1. Basic Information of the Cases

Cases Name	Flood Rescue Document (FRD)	Medical Emergency Assistance Document (MEAD)
Establishment Date	July 20, 2021	March 30, 2022
Social Issue	Lack of transparent information and difficulty in coordinating rescue resources during the extreme rainfall in Henan	Shortage of medical resources and difficulty for patients to access care during a sudden public emergency in Shanghai
Technological Tools	Tencent Docs	Tencent Docs

- Data Collection: Data were collected through multiple methods including public documents, semi-structured interviews.
- Data Analysis: Grounded theory coding methods (open, axial, and selective coding).

Figure 1. Data Structure of Selective Coding

5 Research Findings

The study finds that digital social innovation undergoes four progressive stages, each driven by a core human-machine entanglement mechanism, demonstrating a complete process from problem identification to value diffusion.

Stage 1: Digital Resource Identification

Figure 2. The Human-Machine Perceptual Synchronization Mechanism in the Digital Resource Identification Stage

Proposition 1: In the digital resource identification stage, the needs perception and open mobilization capabilities of digital citizens, together with the module definition capabilities of digital artifacts, form a human-machine perception synchronization mechanism through exploratory entanglement, and jointly construct a cognitive framework and collaborative foundation for social issues.

Stage 2: Digital Resource Pairing

Figure 3. The Human-Machine Information Linking Mechanism in the Digital Resource Pairing Stage

Proposition 2: In the digital resource pairing stage, the content sharing and application execution capabilities of digital citizens, together with the architectural design capabilities of digital artifacts, form a human-machine information linkage mechanism through productive entanglement, and jointly build a fully functional information system and knowledge network.

Stage 3: Digital Resource Structuring

Figure 4. The Human-Machine Strategy Integration Mechanism in the Digital Resource Structuring Stage

Proposition 3: In the digital resource structuring stage, the generation of collective agency among digital citizens, their self-organizing governance capabilities, and the pattern iteration capabilities of digital artifacts form a human-machine strategy integration mechanism through evolutionary entanglement, promoting the intelligent upgrading and autonomous evolution of social innovation solutions.

Stage 4: Digital Resource Multi-homing
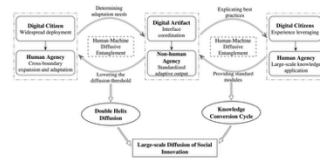
Figure 5. The Human-Machine Boundary-Spanning Collaboration Mechanism in the Digital Resource Multi-homing Stage

Proposition 4: In the digital resource multi-homing stage, the wide-area deployment and experience leveraging capabilities of digital citizens, together with the interface coordination capabilities of digital artifacts, form a human-machine cross-border collaboration mechanism through diffusive entanglement, driving the large-scale diffusion and value multiplication of social innovation.

6 Theoretical Model

Core Argument: Digital social innovation is the result of continuous collaboration between digital citizens and digital artifacts around social issues through four progressive entanglement mechanisms: human-machine perception synchronization, information linkage, strategy integration, and cross-boundary collaboration. This entangled collaboration promotes the evolution of human-machine relationships from tool use to a symbiotic innovation ecosystem.

- **Model Dynamics:**
1) Evolution of Digital Artifact's Role: From passive tool → information system → evolutionary engine → ecosystem infrastructure.
2) Leap in Human Agency: From individual action → collective intelligence → self-organized governance → ecosystem-level influence.
3) Evolution of Human-Machine Relationship: From instrumental use → symbiotic innovation ecosystem.
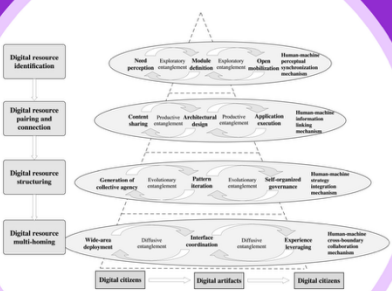
Figure 6. Theoretical Model of the Realization Mechanism for Social Innovation Driven by Digital Collaboration

7 Conclusions & Practical Insights

7.1 Conclusions:

- Human-machine entangled collaboration is the driving mechanism of social innovation, comprising four progressive forms of mangle (exploratory, productive, evolutionary, and diffusive).
- The process of organizing digital resources demonstrates an evolutionary trajectory of human and non-human agency from separation to integration.
- Digital artifacts complete a role transformation from passive tools to active agents within the collaboration.
- Human agency achieves a leap from individual action to collective intelligence through collaboration.

7.2 Practical Insights:

- For Platform Designers: Adopt an ecosystem mindset to design open, evolvable, and modular platforms.
- For Social Innovation Organizations: Treat technology as an innovation partner, cultivate human-machine collaboration literacy, and establish distributed governance mechanisms.
  For Policymakers: Foster an inclusive institutional environment, build digital public infrastructure, and empower rather than regulate innovation.

8 Keywords

Digital Social Innovation, Digital Collaboration, Socio-Technical Mangle, Digital Artifacts, Digital Citizens

The Accidental Infrastructure in a Kenyan Slum:
Exploring the Future of 'Tech for Good'

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The Platform Paradox

WeChat, a platform designed for Chinese market, was unexpectedly appropriated and adapted into into a critical infrastructural tool for a transnational NGO and its local partners in the **Mathare slum, Kenya**. **This study investigates this accidental process**, which emerged in a context of institutional voids and a platform gap between Chinese stakeholders and Kenyan partners (using other platforms).

Research Questions
- **Why WeChat?** Why was an "outsider" platform adopted to fill this gap?
- **How?** How did local socio-material conditions (e.g., data costs, devices) shape this grassroots infrastructuring?
- **Consequences?** What are the social consequences, including asymmetric perceptions and new, technologically-mediated inequalities?

Finding 1:
The Pathway of Accidental Infrastructuring

Step 1: The process starts with top-down "Instrumental Conformity"...

> We must use WeChat for daily, weekly, and monthly reports. It's how we connect to donors.

> Yes, they said we can only communicate to China through WeChat. That is why we use it.

Step 2: The pathway is then filtered by socio-material barriers

> Data is expensive. 1,000 KES for 1 month... And Wi-Fi is a bit expensive...WhatsApp has special data bundles, WeChat does not

> You need help with signing it up. The signing up process is challenging

Step 3: This culminates in grassroots appropriation and a new identity...

> They should integrate M-Pesa. That would be a game-changer

> Tencent could put on advertisements... and maybe add up to ten photos for uploads

Local users have shifted from passive "Users" to proactive "Co-builders"

WeChat was first adopted to bridge a crucial 'platform gap' for a transnational NGO, but despite high costs and technical barriers, local users actively made the tool their own and began suggesting new ideas for its future.

Implications for 'Tech for Good'

For Tech Firms: In addition to dedicated 'Tech for Good' projects, it is also crucial to identify and empower the grassroots appropriation that is already emerging.

For Policymakers: Inclusive digital governance should aim not just to "design for access", but also to "design for appropriation," enabling communities to adapt technologies to their local needs.

For NGOs: As technology introducers, NGOs must mitigate new inequalities to ensure inclusion.

Finding 2: New Inequalities:
The "Political Economy of Feedback"

The priority of using WeChat gave some local community leaders an advantage in resource allocation. This reinforces, rather than disrupts, existing socio-economic hierarchies.

Core Argument:
The 'Protective Space'

The platform's global architecture and its 'outsider' status in this specific market, combined with Tencent's formal 'Tech for Good' mission, creates a fascinating dynamic. This unique position paradoxically created a **"Protective Space"**. The platform was not deeply commercialized in this non-target market; it was perceived as a **"neutral public utility"**. This neutrality allowed local actors to appropriate it as a trusted infrastructure for transnational accountability.

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The Cross-Border Development of Chinese Small Digital Platforms in Southeast Asia:
A Social Construction of Technology Analysis

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Research Question

Against the "Digital Silk Road," existing studies focus on large Chinese digital platforms, neglecting small and medium-sized enterprises (SMEs). This study uses X Company (2018-2024 Southeast Asia operation) to answer:

1. How did X Company transform during its expansion in Southeast Asia?
2. What factors drove these transformations?
3. What do X Company's experiences reveal about the broader dynamics of Chinese digital platforms' globalization?

Theoretical Framework

This study extends the Social Construction of Technology (SCOT) framework (Miao & Xu, 2022) by integrating three dimensions for transnational digital platforms:

1. Macro: "Digital Silk Road," international relations, Southeast Asian market;
2. Meso: Stakeholder (founders, employees, users, etc.) interactions;
3. Micro: Founder's vision, user needs, product design.
It clarifies cross-border platforms' non-linear development, shaped by multi-level social forces.

Core Findings

Via longitudinal fieldwork and 32 stakeholder interviews,the study identifies a three-stage dynamic transformation process of X Company in Southeast Asia:
1. 2012-2015 (Founder-led exploration): Guided by the founder's "internet globalization" vision, X targeted Indonesia (avoiding domestic saturation), developed a localized domino game (simplified for low-educated users), and gained 300,000 daily active users in six months.
2. 2015-2020 (Domestic model-driven socialization): Inspired by QQ/WeChat, X added chat/friend functions and a localized "Werewolf" game; social feature users had longer sessions and lower churn.
3. 2020-2024 (Capital-driven live-streaming): Amid Southeast Asia's live-streaming boom (50%+ users consumed game content, 60% via live-streaming) and investor pressure, X introduced capital, solved network lag via outsourced cloud systems, added monetization tools, and shifted focus to short-term revenue.

Research Values

1. Theoretical: Extends SCOT to transnational contexts, supplements China's digital globalization narratives, clarifies SMEs's dual (flexible/vulnerable) nature.
2. Practical: Rethinks "Tech for Good" via X's value shift, guides cross-border localization, aiding SMEs' overseas expansion.

The Double-Edged Screen: Understanding and Managing Digital Overuse among Generation Z

Name: Gong Hongcun Zhang Yiqin   Deng Sanhong
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Background and Objectives

Context
Generation Z lives at the intersection of digital empowerment and digital dependence. Mobile technologies enhance connection and learning, yet excessive use can erode attention, well-being, and social balance.

Problem Statement
Existing studies focus on digital addiction, overlooking the more widespread and non-pathological overuse behaviors that still impair learning, emotion, and social participation.

Objectives
• To **redefine "digital overuse"** as a multidimensional, behavioral construct distinct from addiction.
• To **develop and validate** a *Mobile Digital Overuse Scale* tailored for Generation Z.
• To **link findings to social governance and "Technology for Good" strategies**, guiding healthy digital transformation.

Methodology

Participants & Data Collection
Two independent samples of Chinese university students (N_1=820, N_2=642) aged 18–26.

Research Design
A three-stage scale development process:
1. *Item Generation* – from literature and interviews.
2. *Exploratory Factor Analysis (EFA)* – identify latent dimensions.
3. *Confirmatory Factor Analysis (CFA)* – test reliability and validity.

Analytical Framework
• Construct validity (AVE, CR, factor loadings)
• Model fit indices (χ^2/df, CFI, TLI, RMSEA)
• Nomological validity via correlations with digital addiction, self-control, and well-being
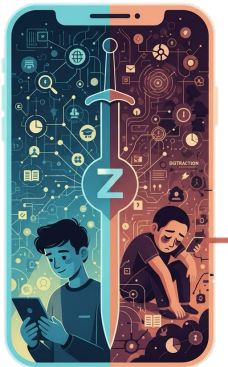
Key Findings and Discussion

Validated Structure
Three **second-order constructs** emerged:
• *Immersive Engagement* (deep absorption, time loss)
• *Compulsive Connectivity* (urge to stay online, fear of disconnection)
• *Functional Impairment* (distraction, fatigue, reduced performance)

Results Highlights
• Strong psychometric properties (α = 0.91; good model fit)
• Digital overuse correlates with addiction (r = .68, p < .001) but remains distinct
• Negative link with self-regulation and well-being

Social Impact Implications
• Offers a **diagnostic tool** for identifying risk levels of overuse.
• Guides **educators, policymakers, and tech designers** in promoting responsible digital ecosystems.
• Advances the **Technology for Good** mission by balancing digital innovation and human flourishing.
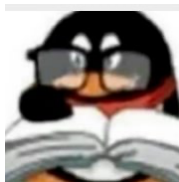
The Fenced Garden: Building Marginalised Communities

[a] Bei JU, [b] Xin PEI, [c] Todd Lyle Sandel & [a] Zhuo WANG
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Facilitating Conviviality & Resilience

• *Migrant Workers*: Group Chats for joking, information sharing (salaries), away from surveillance

• *Elderly Women*: WeChat Sports for mutual health checks, send red packets to maintain caregiver role

• *Crisis Support*: During COVID, video chats & group buys for survival, Mini Programs for counselling

Triggering Risks & Exclusion

• *Surveillance*: Managerial monitor via location/work photo, familial check-ups via video calls

• *Digital Exclusion*: Elderly immobilised by QR health codes and technical barriers

• *Misinformation*: Limited information literacy led to sharing unverified content

• *Harassment*: Female users face sexually explicit jokes in work groups

Community is ...

Social space for solidarity in precarious lives

Socio-technical gap

A utility to maximise engagement & service integration

The community **should not be just built on** but **lived through** it!

FOCUS Framework: Community-centric design

Friendly Mode	Official Information Hub	Community Moderation	User Expression	Supporting Learning
Co-design operational system with one-touch access	Easy-to-find channels for trustworthy resources	Empower admins to flag harassment/ misinformation	Safe spaces for private journaling & trusted sharing	Contextual prompts for privacy and verification

[Why Super-App Model Emerged in China?]

[Liu Chuang]

Why Super-App Model Emerged in China?

INTRODUCTION

In Europe and America, people simultaneously use Gmail, Facebook, WhatsApp, and Instagram to connect with different social circles, such as family members, colleagues, and friends. Whereas in China, all these social interactions are accomplished within WeChat. Why do Western social apps remain functionally specialized with diverse types, while China has developed multifunctional super apps, like WeChat?

RESEARCH FRAMEWORK

The core function of the internet is connection，making it inherently a carrier for social relationships. While internet technology is fundamentally the same worldwide and venture capital operates on similar principles, the distinct social relationship structures between China and the West may be the underlying cause for their divergent internet ecosystems.

Social Relationship Structure in China/West → Social Needs of the Chinese/Western → Functions and Forms of Chinese/Western Social Apps

A COMPARATIVE STUDY

MAIN FINDINGS

The Structure of Social Relationships in the West

Western society is centered on the independent individual, with all people regarded as equal in dignity. Interpersonal interactions must be based on mutually recognized rules and contracts, thus forming social groups. Each group serves a distinct function, and every individual within these groups has clearly defined roles, rights, and obligations.

Social Needs of Westerners

Clear rules, defined roles, and distinct boundaries

Not crossing boundaries is an unspoken rule in Western social interactions.

The Needs and Forms of Western Social Apps

Personal Needs: Clear positioning, simple functions, and well-defined goals.

Forms of Apps: A large number of single-function social apps, each serving the social needs of different groups.

The Structure of Social Relationships in China

Chinese society is centered on personal connections(Guangxi), where the degree of closeness determines his or her responsibilities and obligations to others. Therefore, the primary goal of social interaction for Chinese people is to find common ground and build closer connections. When relationships become close enough, people can regard each other not only as friends or brothers, but even as "family," regardless of blood ties. Among acquaintances, Chinese people emphasize affection and loyalty; with strangers, they adhere to rules.

Social Needs of Chinese People

Extension of personal ties, integration into relationships, overlapping identities.

"Do not treat others as outsiders" is the unspoken rule in Chinese social interactions.

Based on familiar relationships, specific needs arise, social roles are assumed, and action groups are formed.

The Needs and Forms of Chinese Social Apps

Personal Needs: Extending and maintaining familiar relationships, reducing psychological distance, and removing identity barriers. WeChat has come to encompass all types of familiar relationships, becoming a platform that integrates work, entertainment, business, and romance.

Forms of Apps: Super-app model emerges, becoming an extension of all familiar relationships and social needs in the digital space.

Conclusion and Discussion

The social relationship structures of China and the West represent two distinct social systems. The West prioritizes rules and emphasizes boundaries, while China prioritizes emotional bonds and values the absence of boundaries.

Based on distinct social relationship structures, the West has developed diverse applications with clearly defined scopes, whereas China has produced super apps that integrate all kinds of relationships.

American values emphasize independence. Independence fosters individuality, and individuality views conformity as shameful. Consequently, Americans excel at innovation, which is why new internet products consistently emerge from the United States.

WeChat carries forward China's two-thousand-year tradition of familiar relationship networks. Whatever Chinese people need to do, WeChat has to add the feature for it—so the app keeps increasingly comprehensive and multifaceted, super-app model emerged.

Social and Inclusion Impact

AI in Africa - A Historic Crossroads

MIFOUNDOU Alain Serge / REPONGAC

[Can Artificial Intelligence facilitate communication within the UN context?]

[Min Yang, United Nations University Institute in Macau]

As Artificial Intelligence (AI) technology has become increasingly entrenched in daily practices, it is tempting to imagine its potential for enhancing problem-solving. Communication is no exception! In specific United Nations (UN) context, how AI can or cannot optimize communication performance?

- This commentary employed an exploratory design, prioritizing the examination of the existing and emerging perceptions of communication and AI adoption within the UN contexts from diverse stakeholders, including UN staff, actors with experience in UN communication processes and cross-cultural experts.
- Adopted a mixed-method approach, including a review of secondary sources and the collection of primary data through interviews.

Hello, Nice to meet you

© generated by Freepik

Communication Functions

| Information exchange & programme delivery | Decision making & foster trust |
| Coordination & enhance shared understanding | Uphold rights & increase participation |

Influencing Factors of Communication

- UN core value & organizational mandates
- Cultural diversity
- Linguistic diversity
- Information (impartiality, inclusion, integrity)
- Conflicts of economic and political interests
- Complex geopolitical dynamics
- International norms (gender equality, conflict-sensitive approach)
- others

AI Application in UN

716 AI projects

Other52   UNIN 53   CEB 34   DTN 104   ITU 403

- UNIN (United Nations Innovation Network) ● CEB (Chief Executives Board for Coordination) ● DTN (Digital and Technology Network) ● ITU (International Telecommunication Union) ● Other
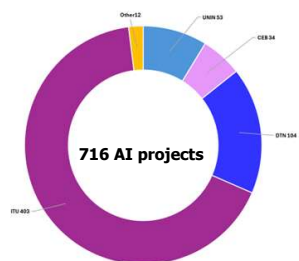
- 716 AI and AI related projects from over 50 UN entities.
- Integrated AI into knowledge management, programme delivery, routine operations, and SDG support.

716 AI projects   244   472

■ AI projects   ■ Generative AI projects
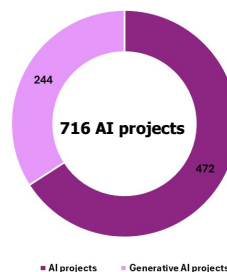
- Generative AI projects accounts for 34 %
- Education and training initiatives emerged to adapt to AI and GAI, in parallel with efforts to understand the impact of AI and GAI on workforce, workplace and markets.
- ITU and UN-OICT proactively formed AI guidelines internally, while some agencies let AI adoption grow naturally.

AI CAN

Facilitate data-driven & text-centric UN programme implementation using Large Language Models (LLMs) and mixed AI models.

Create interactive digital textbooks for children.

Sentiment towards Migration during COVID-19
What Twitter Data Can Tell Us
#MIGRATION

ITU Events
AI for Good Webinar
Unveiling Sexist Narrative: AI Approach to Flag Content on Social Media

Track immigration sentiment deprived from twitter data during the COVID-19 pandemic.

Flag sexist text content on social media.

AI CAN NOT

- Authenticity, accuracy and cultural sensitivity are critical in UN communication. Yet, literature remains limited on AI's ability to accurately identify and interpret nuanced cultural and political meanings in non-textual symbols.

- Inherent technical limitations remain major barriers. AI translation falls short of human standard of faithfulness, expressiveness and elegance. Non-English models underperform than English ones.

- Guidelines and principles for responsible and ethical AI adoption within UN are still underdeveloped.

Conclusion

- Communication is not only as an operational tool, but also a strategic function that shapes policy, enhances coordination, fosters trust, promote shared understanding, increases participation and amplify UN's efforts worldwide.
- Upholding principles of accuracy, integrity, impartiality, inclusion, and respect for diversity is critical for UN communication.
- While AI has been increasingly utilized to assist data-driven and text-centric tasks, inherent technical limitation remain major barriers to effective communication in UN.
- There is a growing emphasis on developing guidelines and framework for the responsible use of AI and Generative AI in UN.
- Guaranteeing AI adoption reflects UN core values and universally recognized human principles is essential for AI to effectively assist communication in UN.

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Jointly organised by **NUS** National University of Singapore | Centre for Governance and Sustainability NUS Business School   **Tencent**   Supported by **CANGO** CHINA ASSOCIATION FOR NGO COOPERATION 中国国际民间组织合作促进会

How Can Intelligent Digital Technology Promote Inclusive Value?
——*A Case Study of Tencent's Sustainable Social Value Practices.*

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Overview

- **Intelligent Digital Technology (IDT)** is emerging as a new type of infrastructure driving socio-economic restructuring.

> In this study, IDT refers to a technological ecosystem that integrates cloud computing, data analytics tools, and AI to enable data management, decision support, and real-time services for individuals or organizations.

- IDT can enhance efficiency and coverage of public service, but may also exacerbate the algorithmic exclusion.
- How to promote inclusive value through IDT, reflecting Tech for Good, is becoming a global challenge.

> In this study, **inclusive value** refers to the positive social impact generated by an organization or individual, particularly enhancing the well-being of vulnerable groups, and promoting equity, accessibility, trust, and participation.

- This study uses **Tencent's Sustainable Social Value (SSV)** practices as cases to explore how IDT empowers nonprofit organizations to promote inclusive value.

Research Questions

- What are the key capabilities of IDT that empower social organizations?
- How do these capabilities promote the generation of inclusive value?

The Capability Blocks of IDT

Capability Blocks	Function
Data Management (DM)	Integrate and standardize multi-source data.
Intelligent Decision-Making (ID)	Adanced analysis, prediction, and strategy support.
Intelligent Service (IS)	AI-powered personalized services.

Inclusive Value Creation Models

Model	Capability blocks			Mechanism for Promoting Inclusive Value
	DM	ID	IS	
1	√			Enhance organizational efficiency
2	√	√		Optimize the allocation of philanthropic resources
3	√		√	Deliver automated and smart services
4	√	√	√	Provide comprehensive support across operations, decision-making, and service delivery

Case Studies

- **Methodology**：Exploratory case study
- **Case Basis**：Tencent SSV Practices
- **Data Sources**：Multi-source + Firsthand insights
- **Analytical Focus**：IDT capabilities → Good Impact

Model	Organization	Tech / Approach	Good Impact / Challenges
1	Beijing Lingfeng Foundation	Tencent Cloud Business Intelligence (BI)	Demand Visibility; Enhanced transparency；organizational efficiency
2	Shanghai Adream Foundation	Tencent ChatBI and DeepSeek	Fairer strategic decision and resource allocation
3	Weifang New-start Social Work Service Center	Tencent Yuanqi AI Agent Platform; Wechat;	personalized assistance; agile services delivery
4 (Future)	—	Integrated Data–Decision–Service loop	**Future:** fully integrated system; **Challenges:** complexity, security, capacity gaps

Theoretical Explanation
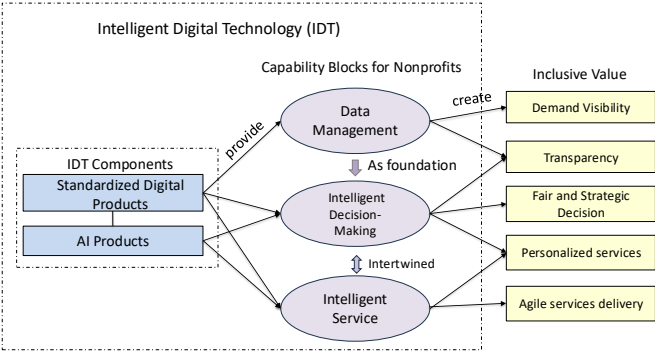
Fig1. Mechanism of IDT Empowering Nonprofits to Create Inclusive Value

- Standardized Digital Products characterized by modular architecture, out-of-the-box functionality, and low deployment barriers, like Tencent Cloud BI.
- AI Products further empower nonprofits with advanced tools, such as natural language processing, automated service. These tools can be embedded into organizational workflows through APIs, or SaaS-based solutions.

Conclusions and Future Direction

1. This study illustrates how IDT empower nonprofit organizations, thereby promoting inclusive value.
2. The generalizability of findings across sectors and countries requires further empirical research.

Inclusive AI-Driven Collaborative Innovation with Consumer and New Product Success: Evidence from WeGame

Fuxin Lin[a], Qianyue Qiao[b], Dongqi Wang[a], Zhi Chen[a], Xiaolan Fu[b], & Xiaobo Wu[a] *
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Background

- **User involvement** has long been regarded as an important way for enterprises to obtain external knowledge and **promote product innovation**.
- **Online user community** became a digital marketplace of ideas — giving product feedback—some vent, some suggest, some innovate.
- **Problem** : Hard to detect useful ideas from massive, messy user comments.
- **Recent advances in LLMs** offer new possibilities to uncover valuable innovation signals from this unstructured data.
- **WeGame**, Tencent's gaming hub, engages millions in co-creation—**an ideal setting** to explore inclusive AI collaboration.

Motivation

- Inspired by **Tencent's mission "Value for Users, Tech for Good"**, we explore how platforms empower developers to translate user voices into inclusive innovation.

Figure. WeGame's Guidance for Developers to Collect and Value User Feedback

Figure. The User Comment Section of the "Party Animals" Game on Wegame

Basic Theoretical Framework

- Based on **User Collaborative Innovation** & **Optimal Distinctiveness Theory**, we propose that:
  I. Product distinctiveness exhibits an inverted U-shaped effect on success;
  II. Exploratory user involvement enhances performance when distinctiveness is high;
  III. Exploitative user involvement works better with strong firm–user interaction.
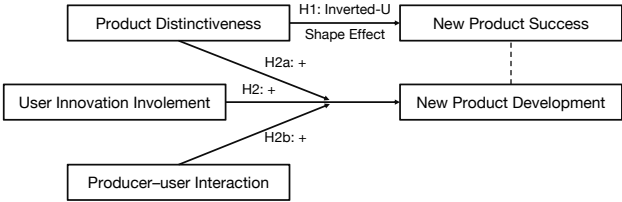
Research Design

- Step 1: Measure Product Distinctiveness (PD) using **Multimodal AI**

- Step 2: Classify 218,655 user comments **via LLMs** for monthly evolution test.

- Step 3: Capture PUI from the **Developer Announcement** on Wegame Platform

Empirical Setting

After AI driven metrics construction,
- Stage 1 — **Cross-sectional regression analysis**: Distinctiveness → New Product Success
- Stage 2 — **Monthly Panel regression analysis**: UII × Moderators → Product Development Performance

Key Findings

Table. Results of Cross-sectional Regression Analysis

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
	Dependent Variable: Ranked among the top 50 on the Wegame user recommendation list					
Tag Distinctiveness	-18.758 (25.239)	729.531*** (250.849)				
Tag Distinctiveness2		-972.394*** (333.746)				
Text Distinctiveness			12.399*** (3.843)	14.613 (11.475)		
Text Distinctiveness2				-23.669** (11.633)		
Visual Distinctiveness					18.514 (15.074)	588.204** (277.196)
Visual Distinctiveness2						-343.867*** (167.853)
_cons	5.593 (10.714)	133.259*** (46.205)	-8.588*** (3.105)	-1.473 (2.735)	-12.936 (9.769)	-212.855** (96.344)
Pseudo R²	.452	.708	.727	.742	.506	.628

N=79. Standard errors are in parentheses.
Note: in brackets are robust standard errors; *,**,*** It means passing the statistical test with significance levels of 1%, 5% and 10%, respectively.
Other Control Variables include Price, Disk_gb, Monthly_reviews, Market Exposure,Release year, Developer Experience, Game mode, Game genre.

Figure. Illustration of the inverted U-shaped relationship for Conclusion 1

Key Conclusion 1 → Confirmed an inverted U-shaped effect:
- Moderate product distinctiveness maximizes success likelihood.
- Excessive similarity or novelty both reduce user acceptance.

Table. Panel Regression Results considering Moderating Effect

	Model (1)	Model (2)		Model (3)	Model (4)
	Dependent Variable: Monthly User Recommendation Rate				
	2 Months Lag			9 Months Lag	
Exploratory UII	.002 (.004)	.001 (.004)	Exploitive UII	.001 (.001)	.001 (.001)
Product Distinctiveness		.55** (.21)	Producer–user Interaction		-.001 (.002)
Exploratory UII x PD		.058** (.028)	Exploitive UII x PUI		.002** (.001)
_cons	1.108*** (.161)	1.089*** (.161)		1.122*** (.146)	1.122*** (.146)
Observations	1461	1461		908	908

Standard errors are in parentheses.
Note: in brackets are robust standard errors; *,**,*** It means passing the statistical test with significance levels of 1%, 5% and 10%, respectively.
Fixed Effect model control Game mode, Game genre.
Other Control Variables include Price, Disk_gb, Monthly_reviews, Market Exposure, Developer Experience, Developer_Tencent_Relativity.

Figure. Illustration of the Moderating Effect

Key Conclusion 2 → User creativity requires both contextual fit and timely feedback to translate into meaningful innovation value:
- Exploratory user involvement boosts distinctive products.
- Exploitative user involvement works only when firms actively respond.

Expected Contribution

Theoretical
- Extend Optimal Distinctiveness Theory by linking product uniqueness with inclusive user innovation in digital platforms.
- Reveal dual roles of exploratory vs. exploitative user involvement in shaping innovation outcomes.

Methodological
- Develop an LLM-powered pipeline to extract innovation signals from large-scale user comments.
- Develop an multi-modal AI to observe firm strategy.
- Combine cross-sectional and panel regressions to trace product success and user-driven evolution.

Practical / Strategic
- Offer Tencent a data-driven lens to enhance producer - user co-creation and product iteration strategy.
- Demonstrate how inclusive AI systems can democratize innovation by empowering users as co-creators, not just consumers.

Practical Implication

- **Innvation Window**. Use inclusive AI pipelines to extract weak but valuable innovative signals from online user communities.
- **Co-create**. Engage users not just as feedback providers, but as active co-creators in the product design and iteration process.
- **Interaction.** Ensure timely and structured feedback loops across the product lifecycle to motivate user creativity and build an adaptive & resilient innovation ecosystem.
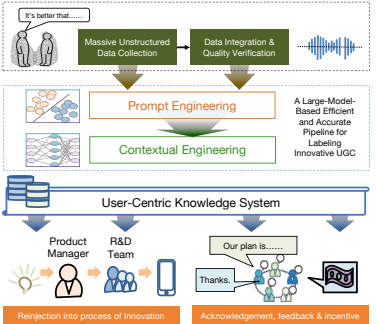
NAVIGATING CONNECTION
Visually Impaired Youth and the Digital Peer World

Zihan Lee[1], Jingyang Quan[2], Xuetao Liu[3], Yanying Lin[4], Wenqian Fan[5]
[1]Renmin University of China (RUC); [2]London School of Economics and Political Science (LSE); [3]The University of Hong Kong (HKU);
[4]University College London (UCL); [5]The George Washington University (GWU)

When visual tools are out of reach, what does connection look like? ......

- While the promise of Tech-for-Good has highlighted the potential of ICTs in promoting inclusive well-being, their impact on marginalized groups - especially people with disabilities (PwDs) - is far more nuanced. For those visually impaired (VI) individuals, the dominance of visually-centered design in mainstream ICTs may reinforce the barriers and risk social exclusion.
- Existing scholarship mostly emphasizes ICT's positive role in functionings (e.g., assistive tech) and empowerment (e.g., education, skills training, career access). However, many studies lack critical perspectives and overlook the relational dimension of ICTs - how technology mediates interpersonal connection, emotional resonance, and the sense of belonging.
- Connection is a vital aspect of human well-being. For VI youth in China, who often face structural exclusion in education and daily life, peer relationships are especially crucial for fostering identity, emotional support, and social integration.
- Mass ICT platforms in China (e.g., WeChat, Douyin, Xiaohongshu/Redbook) offer widespread opportunities for connection. However, their visual-centric interfaces and inconsistent integration of screen reader support can hinder digital participation and compromise the relational experiences of VI users.

Therefore, this paper tries to aks how Mass ICT designs can be improved by asking:

How VI youth actively adapt Mass ICTs in constructing and sustaining peer relationships?
How do they adapt applications that are not originally designed for them? What kinds of affordances and frictions emerge in their daily use?
How do they experience social life - both similarly to and differently from their sighted peers - through ICT-mediated connection?

RESEARCH DESIGN

Theoretical Framework
(1) ICTs as an Connection Enablers
Drawing on the Social Model of Disability and Capability Approach, this paper understands ICTs as socio-technical assemblages that enable or constrain meaningful peer relationships for VI youth.

Core Concepts:
- Social Model of Disability: Disability is not an individual deficit but a product of inaccessible environments.
- Capability Approach (Sen): Focuses on expanding individuals' capabilities and real freedoms - what they are able to do and to be - shaped by "conversion factors".

Function	Details	For VI Youth
Restructuring Time-Space Boundaries	Enables asynchronous, distance-based interaction	Mitigates mobility constraints
Enhancing Accessibility in Various Forms	Through voice, text-to-speech, community adaptation	Supports more inclusive peer dialogue
Providing Flexible Identity Expression	Allows choice in disclosing disability	Reduces stigma, fosters authentic connections

(2) Peer Relationships
Peer relationships play a vital role in social development. For VI youth, these relationships are central to social integration and emotional well-being.

Three Features: Interwoven relational bases; Self-determined formation; Dynamic status

Measurement:
- Granovetter's Tie Strength Theory:Three Dimensions (Emotional intensity; Interaction frequency; Mutual support) to measure
- Social Exchange Theory: Affective vs. Instrumental Motivation with six aspects

Affective			Instrumental		
Emotional Sharing	Interest Exchange	Ritual Connections	Information and Resource	Financial Support	

DATA COLLECTION
- **Method & Tool:** Qualitative methodology using semi-structured interviews (60–120 mins per interview)
  - Focus on how VI youth construct peer relationships in both online and offline settings
  - Platforms studied: WeChat, QQ, Xiaohongshu, Douyin
- **Participants:** 15 VI youth (aged 18–35) from diverse backgrounds
- **Recruitment:** snowball sampling, social media outreach, community referrals

ANALYSIS & RESULTS

(1) Online-Offline Integration: Interdependence Rather Than Substitution
Digital communication does not replace offline interaction but complements it, forming an intertwined socio-relational environment.
- **Offline as Foundation, Online as Extension:** Face-to-face interaction establishes initial trust, while digital tools help maintain and deepen peer connections over time and space.
- **Trust and Immediacy - Complementary Functions:** Online tools enable immediacy and intimacy for visually impaired users, compensating for mobility constraints, especially through voice-based emotional presence.
- **Identity Visibility and the Hierarchy of Communication Media:** Participants strategically navigate visibility - choosing between text, voice, and in-person communication - to balance emotional expression, social exposure, and effort.

(2) Instrumental Dimensions within Affective Communication
Instrumental and emotional communications are deeply entangled and mutually reinforcing in everyday peer interactions.
- **From Functional Exchange to Emotional Bond:** Practical support often evolves into emotional intimacy; helping behavior becomes a carrier of care and trust.
- **Mutual Aid, Reciprocity, and the Ethics of Support:** Informal networks of mutual aid form a flexible social infrastructure, shaped by shared experiences and collective resilience.
- **Strategic Self-Presentation and Emotional Labor:** Seeking help requires emotional labor and strategic disclosure; participants work to maintain dignity while navigating vulnerability.

(3) Ritual Dimensions within Everyday Connection
Ritualized interactions bring rhythm and continuity to relationships, shaping belonging in both symbolic and practical ways.
- **Ritual Interaction as the Prelude to Sociability:** Greetings and holiday wishes function as low-risk entry points for initiating or maintaining weak ties.
- **From Ritual to Routine:** The Evolution of Relational Practices: Over time, formalized rituals transform into personalized micro-practices that sustain emotional closeness.
- **Digital Platforms as Ritual Spaces:** Emojis, voice messages, and daily check-ins on social media platforms act as affective rituals that maintain group cohesion and shared presence.

REFLECTION

"Differences"
Rather than viewing disability as mere lack, this study shows that the communication practices of VI youth constitute unique forms of sociality. ICTs are not just assistive tools but co-create new relational norms - ones rooted in voice, rhythm, and ambient connection rather than vision-based.

"Barriers"
Accessibility is more than screen-reader compatibility; it involves symbolic and cultural translation. Misread silences and unclear social cues highlight that access is situated and relational, shaped by shared meaning and rituals.

"Accessibility"
True inclusion emerges not from static standards but from dynamic, emotional labor and agency. VI youth continuously navigate, negotiate, and reconfigure digital spaces to sustain meaningful peer connections on their own terms.

PRACTICAL IMPLICATIONS

Current Barriers
- **Robustness:** Poor screen reader compatibility often renders apps partially or completely unusable, causing user distress.
- **Operability:** Unresponsive components and difficult-to-close pop-ups trap users, forcing reliance on sighted assistance.
- **Perceivability:** A lack of alternatives (e.g., audio CAPTCHA) and customization (e.g., font size) excludes non-screen reader users

Multi-Level Strategy
- **Industry & Policy Level:** Enforce strong legislation (e.g., Section 508) and national policies to mandate accessibility standards.
- **Company & Culture Level:** Foster a top-down "Culture of Obligation" where accessibility is a moral imperative, not just a feature.
- **Development & Community Best Practices**
  - Engage Continuously: Maintain respectful, ongoing collaboration with the VI community.
  - Avoid "Separate but Equal": integrate features for all into one app, instead of limited "accessible versions"
  - Bake-In, Don't Bolt-On: Embed accessibility throughout the entire product lifecycle, not as an afterthought.

Accessibility Beyond Checklists
- Feature Accessibility: "Can I use the function?"
- Task Accessibility: "Can I complete the goal?"
- Format Accessibility: "Is the process efficient?"

About the Team: Here Research is a group of young researchers from China, using in-depth fieldwork and storytelling to document marginalized lives and human connections through lived stories.

FULL PAPER

The $100 Billion Oversight: How Anthropocentrism Causes WeChat and WhatsApp to Miss the Mark on Accessibility

Wisnu A. Pradana, Ph.D.
National University of Singapore

Anthropocentrism in WeChat & WhatsApp public communication

Both apps claim inclusivity, but their public information (e.g., websites) reveals clear gaps in practice.

whatsapp

- Presents accessibility features clearly in their web, but the word **"disability"** is **absent**.
- Offers users a way to **report issues**, reflecting a **reactive approach**.
- Places the **burden of accessibility** on users, causing **"access fatigue"** (Konrad, 2020).

wechat

- Disability is referenced on public websites only within moderation policies as a **"protected characteristic."**
- Frames **disability as a vulnerable, static identity**, ignoring the dynamic and diversity of lived experiences.

For both platforms, **disability and accessibility remain secondary,** still treated as a **PR checkbox** rather than a core design principle.

Global Population of Individuals with Disability

15%
An estimated 15% of the world's population have a disability.

1 in 5
One in five women is likely to experience disability during her life.

46%
46% of persons aged 60 years and over have a disability.

1 in 10
One in ten children is a child with a disability.

WhatsApp and WeChat prioritize typing, while call functions are minimized.

Global Mobile Ownership Gap: Disabled vs. Non-Disabled

what happens out there (that you might not know)

START HERE

Over **1 billion people** live with disabilities, including **250 million adults** with significant mobility, coordination, or speech challenges. Yet, digital tools often prioritize non-disabled users, leaving many **disconnected not by choice**, but because current technologies **do not align with their communication needs** (Satari & Carboni, 2025).

Mainstream platforms could help **restore autonomy**, but in this hyperconnected world, **where do WhatsApp and WeChat fall short** in inclusive communication and accessibility? And **how might AI help design super-apps** that truly serve **all users**?

the $100 Billion Oversight of WeChat & WhatsApp

what causes the oversight (anthropocentrism)

Disability has always been part of human civilization. From **Ancient China to Greek culture**, people with disabilities have appeared in literature, art, and folklore.

Despite this long history, they remain **marginalized**. This reflects anthropocentrism (Braidotti, 2013), a worldview that treats certain humans—male, able-bodied, urban, and heterosexual—as the **standard of normality**, labelling others as **"deficient," "in need of help"**, and **"abnormal"**.

Hephaestus (middle), a Greek god with malformed feet.

面部欲溥平潤澤，手足欲深細明直，行步欲安穩覆載，音頭面手足，身形骨節，皆欲相副稱。此其略要也。聲欲溫和中宫。

The face should be broad and balanced (=symmetrical), sleek and glossy; the arms and legs should be long, slender, fair and straight; the gait should be comfortable and secure, [as if] both carrying a load and itself being carried, the voice should be mild, harmonious and balanced in its tune. The head, the face, the arms, the legs, the figure and frame all need to complement one another. These are the essential requirements [of physique]. [14]

The Qianfu Lun (78–163 CE) description of ideal human body, which excludes & marginalizes disabled individuals

Anthropocentric bias in apps designs

In communication, **anthropocentric bias** elevates **speech** as the norm while devaluing **non-verbal modes** such as gesture, gaze, facial expression, and sign language—the very languages many disabled individuals rely on.

In communication app design, this bias becomes **technological determinism**, forcing users to conform to a **uniform system** instead of supporting diverse needs.

In WhatsApp and WeChat:
- **Text and chat** dominate menus and default screens.
- **Large typing areas** emphasize writing, while **calls and non-verbal modes** are minimized.
- **Voice or video messages** require multiple steps, creating a **hierarchy that privileges text**.

For users with disabilities, these design choices render **non-verbal communication cumbersome and secondary.**

what we do

We examine how **anthropocentrism in WhatsApp and WeChat** affects **accessibility for individuals with complex communication needs**. Our goal is to explore how this bias appears in the apps' **design and public-facing statements**, resulting in **barriers to inclusive communication and misconceptions of disabilities**.

Using the **walkthrough method** (Light et al., 2018), we **critically analyze everyday app interactions** through digital observation, focusing on:

- **Interface arrangement**
- **Functions and features**
- **Textual content and tone**
- **Symbolic representation**

We investigate how these apps support **five communication modalities**: corporal, oral, oculesics, haptics, and vocalics (Bhattacharya & Pradana, 2022).

Data collection (websites, screenshots, video recordings) occurs **July–September 2025**, with **three-stage coding** (descriptive, thematic, free) following Saldaña (2021).

Grid-format interface in AAC system that WhatsApp & WeChat can model

AI-Powered Recommendations for WeChat & WhatsApp

- **Redefine the starting point:** Design with those **facing the greatest barriers**—not the able-bodied majority—as the foundation of innovation.
- **Move beyond one-size-fits-all:** Use AI to create personalized navigation that adapts to each user's abilities, preferences, and accessibility needs.
- **Support non-verbal communication:** Integrate **AI translation tools** to convert eye-gaze, gestures, and sign language into text or speech in real time.
- **Redesign for accessibility:** Employ **AI-assisted layout optimization**—grid formats, larger icons, and high-contrast visuals—mirroring AAC systems for easier navigation.
- **Leverage adaptive intelligence:** Enable **AI-driven interfaces** that dynamically adjust layouts, menus, and interaction modes based on user behavior.
- **Reimagine WeChat's Mini Programs:** Use **AI curation** to prioritize **essential services** (healthcare, emergency, and social support) for users with disabilities or mobility challenges.

Throw Away Your Handphone and Smartwatch!
Empowering the Poor, Elderly and Disabled with Data Access
<u>Without Any Physical Device</u> – Technology for Social Benefit

Chiang Liang Kok, The University of Newcastle Australia
Tee Hui Teo, Singapore University of Technology and Design
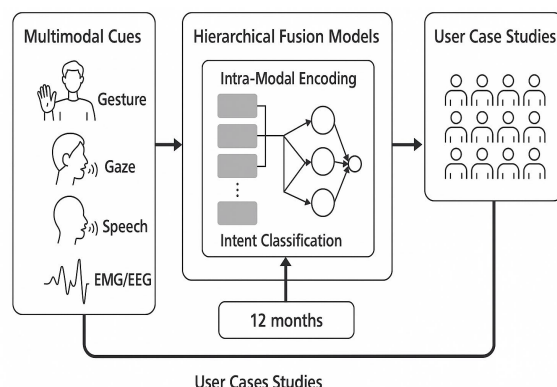
科技向善   科技向善

WE ARE THE DEVICE

HUMAN AS THE INTERFACE
AMBIENT AI FOR DIGITAL INCLUSION

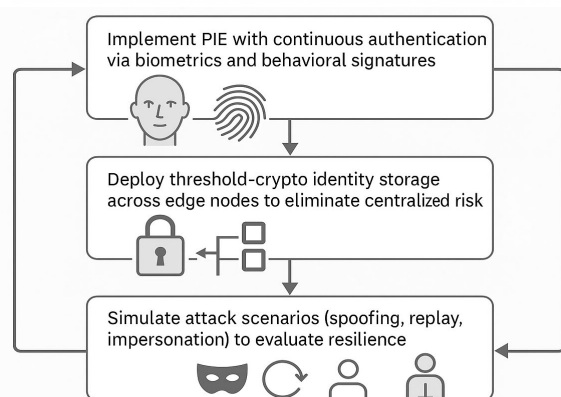**REIMAGINING DIGITAL INTERACTION**
FOR THE GOOD OF SOCIETY

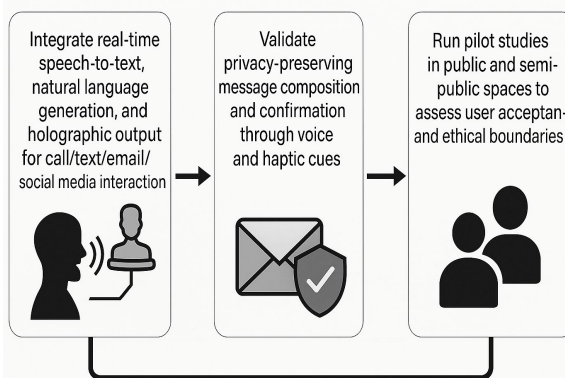Access Data, Call/Text Friends, Reply to Emails & Surf Social Media Without any PHYSICAL DEVICE

**Phase A
Perception and Intent Recognition
(12 months)**

Multimodal Cues — Gesture, Gaze, Speech, EMG/EEG
Hierarchical Fusion Models — Intra-Modal Encoding, Intent Classification
User Case Studies
12 months
User Cases Studies

**Phase B
Identity and Security
(6 Months)**

Implement PIE with continuous authentication via biometrics and behavioral signatures
Deploy threshold-crypto identity storage across edge nodes to eliminate centralized risk
Simulate attack scenarios (spoofing, replay, impersonation) to evaluate resilience

**Phase C
Integration of Communication Modules
(24 Months)**

Integrate real-time speech-to-text, natural language generation, and holographic output for call/text/email/social media interaction
Validate privacy-preserving message composition and confirmation through voice and haptic cues
Run pilot studies in public and semi-public spaces to assess user acceptan- and ethical boundaries

**Phase D
Human Digital Twin and Adaption
(18 Months)**

Construct perconalized HDTS for adaptive context prediction
Gesture, Gaze, Speech → Human Digital Twin → Adaptive Context → Differential Privacy
Adaptive Context Prediction
Introduce federated learning with differential privacy to ensure secure personalization without raw data sharing
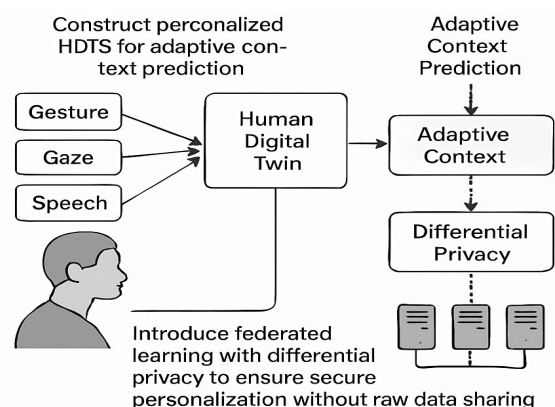
What Drives the Social Impact of Digitally-Enabled Philanthropic Innovation Initiatives in China?

Yiming Dai[1], Yue Ming[2] and Zhongsheng Wu[1]
[1]Zhejiang University, Hangzhou, China; [2]Tsinghua University, Beijing, China

1. Introduction

Research Background
- Digitalization is fundamentally reshaping philanthropic practices globally, transforming donation behaviors, organizational operations, and social impact measurement.
- China presents a distinctive case characterized by rapid growth and continuous innovation, with cumulative participation exceeding 51 billion person-times by 2023.
- Despite the explosive development, a significant practice-scholarship gap remains. The sector's digitalization and innovation still faces significant resource constraints and limited social impact.

Research Question
- *Technology for Good: How?*
- *What are the conditions that drive the social impact of digitally-enabled philanthropic innovation (DPI) initiatives?*
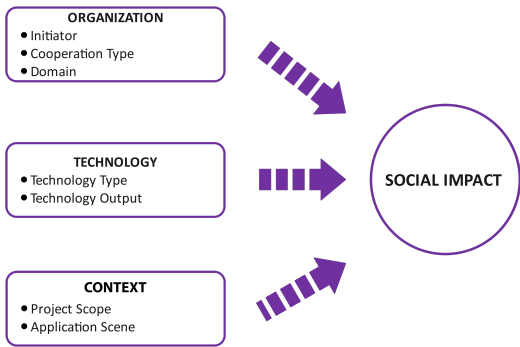
2. Framework

Figure 1. OTC Framework for Social Impact of DPI Initiatives

3. Methods

Approach: Fuzzy-set Qualitative Comparative Analysis (fsQCA)

Data and Sample
- **Source:** Tencent "Technology for Good" project database
- **Criteria:** maximum similarity & maximum heterogeneity
- **Final Sample:** N=**72** DPI initiatives (September 2025)

Measurement

Table 1. Descriptive Statistics

Dimension	Variables	Attributes	N	Freq/Mean
Outcome	Perceived Social Impact (1~10)		72	4.53
Causal Conditions: Organization	Number of Initiating Organizations		72	1.88
	Type of Organizational Cooperation	Inter-Sector	20	27.80
		Intra-Sector	2	2.80
		None	50	69.40
	Number of Project Domains		72	2.36
	Project Domain	Care & Advocacy	31	43.10
		Natural Conservation	15	20.80
		Education Support	12	16.70
		Medical Aid	6	8.30
		Rural Revitalization	4	5.60
		Disaster Relief	4	5.60
Causal Conditions: Technology	Type of Technology	Other Digital Tech	57	79.20
		AI and Other Digital Tech	13	18.10
		AI	2	2.80
	Type of Technology Output	Platform	55	76.40
		Instrument	13	18.10
		Content	4	5.60
Causal Conditions: Context	Scope of Project Coverage	Local	7	9.70
		National	65	90.30
	Project Application Scene	Organizational Management	4	5.60
		Service Provision	68	94.40

4. Findings

Table 2. Configurations for Social Impact of DPI Cases.

Condition	Solution	
	C1	C2
Initiating organizations	●	●
Cooperation type	●	●
Project domains	○	
Project coverage scope	●	●
Project application scene	●	●
Technology type		●
Technology output type	●	●
Typical case	WeChat Pay Charity Meal	Tencent Snow Leopard Protection Project
Solution consistency	0.934	0.951
Solution coverage	0.307	0.189
Unique coverage	0.151	0.033
Overall solution consistency	0.924	
Overall solution coverage	0.340	

Note: (1) C represents configurations; (2) ● indicates the presence of a core condition; ● indicates the presence of a peripheral condition; ○ indicates the absence of a core condition. Blank space indicates the condition is ambiguous, which can either be present or absent.

Two Pathways to High Social Impact
- **Core Conditions**: Platform/System-level Technology Output * High Initiating Organizations * Deep Cooperation * National Scope * Service Provision

- **Path 1: Domain-Focused Collaboration (C1)**
  - **Characteristics:** Core conditions + ~ Project domains
  - **Key insight:** A focused operational scope, concentrating resources on limited domains.
  - **Typical Case:** "WeChat Pay Charity Meal" (微信支付爱心餐)

- **Path 2: Technology-Driven Collaboration (C2)**
  - **Characteristics:** Core conditions + Advanced Technology
  - **Key Insight:** Innovative technologies to manage complexity and deliver impact.
  - **Typical Case:** "Tencent Snow Leopard Protection Project" (腾讯守护雪豹计划)

5. Implications

- **"Tech for Good" is Not "One Size Fits All":** DPI can succeed by focusing on single domain, or by leveraging advanced technology to solve complex issues.
- **One Path for All:**
  - Facilitate cross-sector collaborations
  - Leverage "Technology for Trust"
  - Prioritize Project Scale & Direct Service