

# Reconfiguring Confucian Ethics in the Perspective of Cyberism: Human, Relations, Space, and Order in Digital Society

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## Abstract

The rapid expansion of cyberspace is fundamentally reshaping human existence, social relations, spatial structures, and mechanisms of order formation. These transformations pose significant theoretical challenges to Confucian philosophy, which has traditionally been grounded in embodied individuals, stable relational networks, and community-based ethical orders. Drawing on the framework of Cyberism, this paper re-examines Confucian philosophy through four foundational dimensions—human, relations, space, and order—and analyzes how emerging socio-technical conditions, including digital humans, algorithmic mediation, hybrid virtual–physical environments, and platform governance, destabilize its underlying assumptions. We argue that these transformations do not render Confucian ethics obsolete; rather, they call for its reinterpretation and reconstruction within a cyber-enabled context. Building on this analysis, the paper proposes three conceptual pathways for the transformation of Confucian ethics in the digital age: digital rituality as a framework for regulating interaction order in platform environments; algorithmic benevolence as a normative orientation for embedding human-centered values into technological decision-making; and

platform-based community as a model for reconstituting public good under conditions of data-driven social organization. By articulating these concepts, the study contributes to bridging classical ethical traditions and contemporary digital governance, and offers a Confucian approach to addressing the ethical challenges of cyber civilization.

**Keywords:** Confucian ethics, Cyberism, Digital society, Algorithmic governance, Platform ethics, Moral philosophy

## 1 Introduction

Human existence and social practice have always taken place within structured spatial environments. Classical philosophical traditions, including Confucianism, understand human activity as embedded in relatively stable physical space, social space, and thinking space [Lefebvre \(2014\)](#). However, recent developments in digital technologies, especially the internet, artificial intelligence, and data-driven platforms, have introduced cyberspace as a new and influential domain. Cyberspace is no longer only a technical medium for information transmission. It has gradually become a space with its own operational logic, normative mechanisms, and practical effects. As a result, human behavior, social organization, and knowledge production are increasingly shaped by interactions across physical space, social space, thinking space, and cyberspace. To describe this transformation, Ning and colleagues propose Cyberism as a theoretical framework. This framework emphasizes the integrated structure of Cyber–Physical–Social–Thinking space [Ning \(2025\)](#). It highlights that different spaces are not independent. Instead, they are interconnected and co-evolving. Human activities are now embedded in this multi-space system.

The emergence of cyberspace changes the foundation of social organization. In traditional societies, social order is mainly based on geographical proximity, kinship ties, and face-to-face interaction. In contrast, in the digital era, social order increasingly depends on the interaction between physical environments, social relations, and algorithmic systems [Castells \(2011\)](#); [de Souza e Silva \(2006\)](#). This shift has several consequences. It changes how identities are constructed. It reshapes how relationships are formed. It also affects how public opinion is aggregated and how norms are enforced. These changes place new pressure on ethical systems that were originally built on stable communities and embodied interactions [van Dijck, Poell, and de Waal \(2018\)](#); [Zuboff \(2023\)](#).

For Confucian philosophy, the challenge is not limited to practical issues such as privacy, algorithmic bias, or data security. It concerns more fundamental questions. These include the nature of the human subject, the structure of social relations, the organization of communal space, and the foundation of social order. Traditionally, Confucianism understands the human as a moral agent who can achieve self-cultivation. It views social relations as structured networks of obligations based on difference and hierarchy. It describes social space through the layered structure of family, state, and all-under-heaven. It maintains order through ritual propriety, moral education,

and ethical evaluation. Under conditions of digitalization and platformization, these assumptions are becoming unstable. The emergence of digital humans, artificial agents, and cyborg-like forms challenges the boundary of moral subjectivity. Algorithmic recommendation systems reshape the formation of social relations. Virtual communities and metaverse environments weaken traditional forms of spatial belonging. At the same time, platform governance and algorithmic regulation partially replace ritual and moral cultivation [Bell \(2010\)](#); [Pasquale \(2015\)](#); [Suler \(2004\)](#); [Yeung \(2019\)](#). Therefore, the key question is not whether ethics is still needed in the digital age. The real question is how Confucian philosophy can reinterpret its core categories in this new context. These categories include human, relations, space, and order.

Existing scholarship at the intersection of ethics and information technology has addressed many of these concerns from within Western philosophical traditions. Value sensitive design has shown that technological systems embed normative assumptions requiring explicit ethical examination [Friedman, Kahn, and Borning \(2008\)](#). Information ethics has articulated the conditions for responsible data stewardship and the epistemic obligations of platform actors [Coeckelbergh \(2020\)](#). Research on algorithmic accountability has mapped the mechanisms by which automated systems can reproduce and amplify social inequity [Mittelstadt, Allo, Taddeo, Wachter, and Floridi \(2016\)](#). Scholarship on technology and the virtues has argued that digital environments reshape character cultivation in ways that require rethinking classical frameworks [Valloir \(2016\)](#). However, most of this work draws primarily on liberal rights theory, Kantian deontology, or Aristotelian virtue ethics. The contribution of non-Western ethical traditions—and Confucianism in particular—to the normative analysis of digital society remains underexplored [Hongladarom \(2007\)](#). Existing studies also tend to focus on practical issues such as privacy, fairness, and security without fully addressing the transformation of deeper philosophical categories: the nature of moral subjectivity, the structure of ethical relations, the organization of communal space, and the foundation of social order. In particular, it remains unclear how Confucian values can be systematically applied to platform governance, algorithm design, and virtual community construction. To address this gap, this paper adopts Cyberism as its analytical framework. It focuses on four core dimensions of Confucian philosophy—human, relations, space, and order—examines how these categories are destabilized in the context of cyberspace, and explores how Confucian ethics can be reconstructed.

This study makes three main contributions.

**First**, it shows how cyberspace challenges the basic assumptions of Confucian philosophy across four dimensions.

**Second**, it proposes three concepts. These are digital rituality, algorithmic benevolence, and platform-based community. These concepts provide possible pathways for transformation.

**Third**, it connects Confucian ethics with real-world issues such as platform governance and algorithm design. It demonstrates the relevance of Confucian philosophy to digital society.

The rest of the paper is organized as follows. Section 2 introduces the foundational assumptions of Confucian philosophy. Section 3 analyzes how these assumptions are destabilized. Section 4 identifies the key philosophical problems. Section 5 proposes

three transformation pathways. Section 6 presents case analysis. The final section concludes the paper and suggests future directions.

## 2 Four Foundational Assumptions of Confucian Philosophy on Human Beings and Social Space

Confucian philosophy understands human beings and social space through four closely related dimensions: human, relations, space, and order. These four dimensions answer four basic questions. They explain what a human being is, how people are connected, how community is organized, and how social order is sustained. In this framework, the human is understood as a moral subject capable of self-cultivation. Relations are structured through differentiated ethical obligations. Space is organized through the layered order of family, state, and all-under-heaven. Order is maintained through ritual propriety and moral education. Together, these four dimensions form the basic structure of Confucian philosophy on human beings and social space.

### 2.1 Human: The Moral Subject Centered on Virtue

Confucian philosophy understands the human as a moral subject defined not by biological constitution but by the inner capacity for self-cultivation and ethical responsibility. As expressed through Confucius's concept of *ren* and Mencius's "four beginnings," the defining feature of humanity lies in the possibility of moral development rather than in reason, language, or sociality alone [Yang and Zhao \(2018\)](#). This virtue-based conception insists that moral cultivation cannot be outsourced to external institutions [Ames and Rosemont \(2010\)](#): a subject is morally significant because it takes responsibility for its conduct and forms stable character through sustained practice. Crucially, the Confucian human is embodied and affective—moral responsiveness arises in concrete situations and through lived relations, not through detached calculation. This understanding frames the central question that digital transformation intensifies: who can bear moral responsibility, and what kinds of beings can count as ethical subjects under conditions of expanding cyber-existence?

### 2.2 Relations: An Ethical Network Structured by Differentiation

Confucian philosophy understands persons as always already situated within pre-existing relationships—parent and child, ruler and minister, friend and friend—through which ethical identity takes shape. The central feature of Confucian relational thought is differentiated extension: moral concern proceeds outward from the near to the distant through graded forms of responsibility, beginning with concrete relationships where care and obligation are first learned and practiced [Fei \(1998\)](#). Ritual propriety (*li*) gives form to emotion, role, and behavioral boundary, transforming natural connection into stable ethical order [Liang \(2006\)](#). This framework depends on relatively stable identities and enduring responsibilities. When relations are increasingly shaped by algorithmic recommendation, interest-based aggregation, and weak digital ties, the social basis of differentiated Confucian ethics begins to weaken.

### **2.3 Space: A Layered Community Structure of Family, State, and All-under-Heaven**

Confucian philosophy understands space not as a neutral physical container but as a lived structure carrying ethical identity, communal belonging, and normative order. The sequence of family, state, and all-under-heaven constitutes the basic structure of ethical space: the family is the primary site of moral formation; from there, responsibility expands through state governance toward the broadest horizon of shared humanity. This layered structure is not merely hierarchical—it provides the spatial framework within which individuals develop lasting attachments, responsibilities, and a sense of order. When contemporary life is increasingly marked by cross-platform mobility, multiple overlapping identities, and the interpenetration of physical space and cyberspace, this stable communal structure faces significant pressure.

### **2.4 Order: A Normative Structure Sustained by Ritual Propriety and Moral Education**

Confucian order is not mere social control but an ethical order grounded in ritual propriety (*li*) and moral education. Ritual defines roles, status, and behavioral boundaries, serving as the medium through which moral requirements become socially practicable. Moral education ensures that norms are internalized rather than merely imposed: lasting order requires members to identify with the values that rules express, not simply to comply under external pressure. Confucian order is simultaneously hierarchical and context-sensitive, guided by *yi* (appropriateness) and adjusted to concrete situations. This conception of order—dependent on shared recognition and moral cultivation—provides the primary point of contrast for later discussions of algorithmic regulation, as summarized in Table 1.

## **3 Destabilization of the Four Foundational Assumptions under the Perspective of Cyberism**

The perspective of Cyberism does not merely introduce a new analytical context. It reveals that the social conditions supporting Confucian philosophy are undergoing structural change. The traditional understanding of human beings, relations, space, and order in Confucian thought is grounded in embodied existence, stable identities, continuous communities, and everyday moral education. With the rise of cyberspace, these conditions are being transformed. As shown in Table 2, the four foundational dimensions of Confucian philosophy begin to lose their stability.

### **3.1 Human: From Embodied Persons to Expanded Cyber-Existence**

The first transformation concerns the concept of the human as a moral subject. Traditional Confucian philosophy grounds moral subjectivity in embodied existence—the unity of body, emotion, and ethical consciousness. In the context of cyberspace, the category of the human is expanding to include not only biological persons but also

**Table 1** Four Foundational Assumptions of Confucian Philosophy on Human Beings and Social Space

Dimension	Core conception	Normative basis	Social function
Human	The human as a moral subject centered on virtue	Self-cultivation, moral awareness, embodied ethical responsiveness	Grounds moral responsibility and ethical agency
Relations	An ethical network structured by differentiation	Role-based obligation, graded care, ritual propriety	Organizes ethical identity through enduring relational responsibilities
Space	A layered community structure of family, state, and all-under-heaven	Belonging, communal continuity, extension of responsibility	Provides the spatial framework for ethical life and public order
Order	A normative structure sustained by ritual propriety and moral education	Li, moral education, appropriateness, internalized restraint	Maintains social coordination, legitimacy, and ethical stability

Note: This table summarizes the four foundational assumptions identified in classical Confucian philosophy. Rather than treating human beings, relations, space, and order as separate themes, the framework presents them as mutually connected dimensions of a unified ethical and social vision.

digital humans, artificial agents, and cyborg-like forms that exist across physical, social, thinking, and cyber spaces [Ning \(2025\)](#); [Ning, Liu, Ma, Yang, and Huang \(2016\)](#). This diversification destabilizes the boundary of moral subjectivity. Confucian thought assumes that moral qualities such as *ren* depend on the unity of inner feeling and moral awareness; yet in the digital context, it becomes possible to produce behaviors resembling moral action without corresponding inner states. When a digital human simulates empathy, or when an autonomous system makes consequential decisions, the question of who bears moral responsibility—and what inner conditions such responsibility requires—cannot be answered through classical categories alone.

### 3.2 Relations: From Differentiated Ethical Bonds to Algorithmic Connections

The second transformation concerns the structure of social relations. In traditional Confucian thought, ethical relations form through long-term interaction, shared experience, and stable social roles. In digital environments, relations are increasingly generated by recommendation systems, interest matching, and data-driven categorization. These algorithmically mediated connections tend to be weak—lacking the emotional depth and long-term responsibility of traditional relations—highly flexible, and quantified through metrics such as followers, likes, and engagement rates [van Dijck \(2014\)](#). When relations become fragmented and decontextualized, ritual propriety loses the stable roles and meaningful contexts it requires to function effectively [Eubanks \(2018\)](#). Moreover, personalized information environments tend to confine users within

**Table 2** Destabilization of the Four Foundational Assumptions under the Perspective of Cyberism

Dimension	Classical Confucian assumption	Cyber transformation	Philosophical consequence
Human	Moral subjectivity is grounded in embodied persons with inner moral awareness	The category of the human expands to digital humans, artificial agents, and cyborg-like forms	The boundary of moral subjectivity becomes unstable
Relations	Ethical relations rely on stable identities, long-term interaction, and differentiated obligations	Social ties are increasingly mediated by recommendation systems, quantified visibility, and weak digital connections	The relational basis of differentiated ethics is weakened
Space	Social space is organized through the layered structure of family, state, and all-under-heaven	Spatial belonging becomes fluid, hybrid, and cross-platform, with multiple overlapping identities	Communal continuity and responsibility allocation become more difficult
Order	Social order is sustained through ritual propriety, moral education, and shared recognition	Order is increasingly shaped by platform rules, automated moderation, and algorithmic governance	Normative legitimacy shifts from ethical cultivation toward technical regulation

Note: The table highlights that the impact of Cyberism is structural rather than merely technical. What becomes unstable is not only a set of social practices, but also the deeper philosophical assumptions on which Confucian conceptions of human beings and social space have traditionally relied.

homogeneous circles, obstructing the encounters with difference that the Confucian mechanism of moral extension—caring first for the near, then extending concern outward—requires [Haraway \(2013\)](#); [Pariser \(2011\)](#). The ethical function of relations is thereby altered at its foundation.

### 3.3 Space: From Layered Community to Fluid and Hybrid Spatial Structures

The third transformation concerns spatial structure. Confucian social space is organized through the relatively stable layers of family, state, and all-under-heaven [Zhao \(2005\)](#). In the digital era, cyberspace interacts with physical, social, and thinking space in complex ways, producing a cyber-enabled society in which the internet, social media, big data, and recommendation systems extend, reorganize, and recode real social relations [de Souza e Silva \(2006\)](#). While digital technology can sustain and even extend communal ties—family ties through online groups, civic belonging through digital governance platforms, shared order through transnational networked publics [Benkler](#)

(2006)—it simultaneously destabilizes the ethical function of space. Digital environments weaken the stability of identity, create gaps between name and role [Solove \(2004\)](#); [Suler \(2004\)](#), disembed interaction from bodily presence, and disperse responsibility across platform systems and algorithms [Turkle \(2011\)](#), making the situational coherence that ritual propriety requires increasingly difficult to maintain.

### **3.4 Order: From Ritual-Based Order to Algorithmic Regulation**

The fourth transformation concerns the structure of order. In traditional Confucian thought, social order is maintained through ritual propriety and moral education, requiring both external regulation and internal moral commitment. In digital society, order is increasingly shaped by platform rules, content moderation systems, and recommendation algorithms that regulate behavior at scale through code and data [Lessig \(2006\)](#). This form of regulation differs from Confucian order in three important respects: it prioritizes efficiency and risk control over moral cultivation; it typically operates without transparency, leaving users unable to understand how decisions are made; and it is designed by platform operators rather than through shared ethical deliberation, potentially introducing forms of technical arbitrariness and asymmetrical control [Cheney-Lippold \(2011\)](#); [Crawford \(2021\)](#). When behavior is guided primarily by external algorithmic constraints, opportunities for moral reflection diminish, creating a structural gap between regulation and moral development that classical Confucian order cannot simply accommodate.

## **4 Core New Problems of Confucian Philosophy under the Perspective of Cyberism**

The expansion of cyberspace does not only transform the technical conditions of human life. It also brings a series of fundamental philosophical problems back to the foreground of Confucian thought. These problems are no longer limited to how technology should be used. They concern the conditions, scope, and transformation of core Confucian categories such as *ren*, *yi*, *li*, sincerity, and self-discipline in digital society.

The previous section has shown how the four foundational dimensions of Confucian philosophy become destabilized. On this basis, the present section further identifies the key problems that Confucian philosophy must address under the perspective of Cyberism. As shown in [Table 3](#), these problems can be grouped into three main dimensions: the problem of moral subjectivity, the problem of ethical relations, and the problem of value order.

### **4.1 The Problem of Moral Subjectivity: The Challenge of New Forms of “Human”**

The problem of moral subjectivity arises because digital humans, autonomous systems, and cyborg-like forms challenge the Confucian assumption that moral agency is grounded in embodied natural persons. When responsibility is distributed across

**Table 3** Core New Problems of Confucian Philosophy in the Age of Cyberspace

Problem dimension	Core issue	Manifestation in digital society	Challenge to Confucian philosophy
Moral subjectivity	Who can count as a moral subject under new technological conditions?	Digital humans, autonomous systems, and cyborg-like forms blur the boundary of personhood and responsibility	Confucian ethics must reconsider the conditions of moral agency and responsibility
Ethical relations	How can ethical relations be sustained when identity and interaction become fragmented?	Anonymity, identity switching, weak ties, and platform-mediated interaction erode continuity and sincerity	The relational foundations of self-discipline, sincerity, and ritual propriety become unstable
Value order	Can public good still be maintained under platform logic and attention competition?	Metrics, visibility, engagement, and commercialization reshape public discourse and communal priorities	Confucian ideas of justice, common good, and ethical regulation face structural pressure

Note: These three problem dimensions are not independent. Rather, they represent the main philosophical consequences of the destabilization of human, relations, space, and order in cyberspace.

designers, users, and algorithms—or when systems simulate morally meaningful behavior without genuine inner states [Bostrom \(2014\)](#); [Ning, Yin, Ullah, and Shi \(2021\)](#)—the unity of moral judgment and accountability that Confucian ethics assumes cannot be taken for granted. It must clarify which kinds of entities can bear responsibility, and which can only function as instruments of action.

## 4.2 The Problem of Ethical Relations: The Erosion of Relational Foundations

The problem of ethical relations concerns the erosion of the conditions under which Confucian relational ethics operates. Anonymity, identity switching, and platform-mediated interaction allow individuals to separate behavior from stable identity [Turkle \(2011\)](#), undermining the Confucian concepts of self-discipline (which requires continuity between the private and public self) and sincerity (which requires unity of inner intention and outward expression). When interaction becomes fluid across contexts and roles [Bailenson \(2018\)](#), ritual propriety loses its situational grounding.

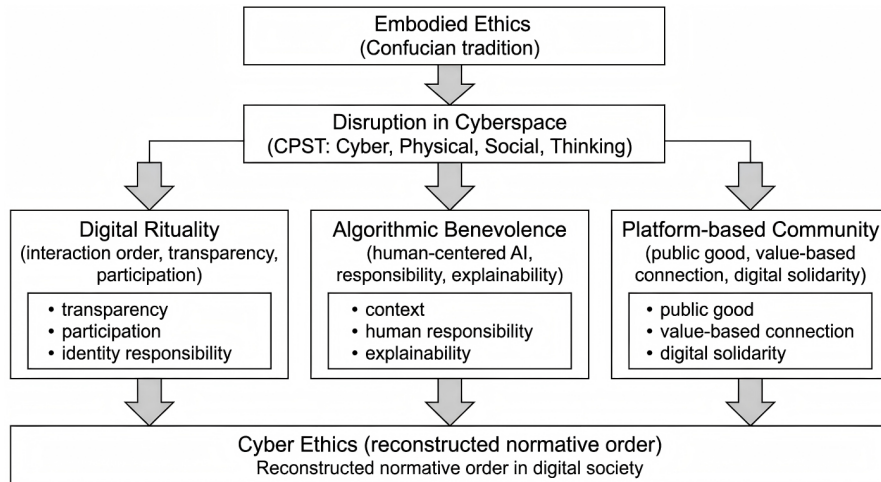
## 4.3 The Problem of Value Order: The Impact of Platform Logic on the Public Good

The problem of value order concerns how platform-driven structures reshape the conditions for sustaining the public good. As social interaction is organized through metrics of likes, shares, and follower counts, attention becomes a competed-for resource rather

than a vehicle for moral extension [Cohen \(2019\)](#); [Lanier \(2018\)](#). Algorithmic systems that amplify emotional intensity and division weaken the shared ethical commitments that Confucian thought regards as the basis of communal life. Together, these three problems define the philosophical agenda that the following section addresses through three transformative pathways.

## 5 From Embodied Ethics to Cyber Ethics: Three Pathways for the Transformation of Confucian Philosophy

Faced with the systematic disruption that cyberspace brings to the four dimensions of human, relations, space, and order, Confucian philosophy can neither remain in a purely conservative position nor simply adapt itself to technological determinism. A more constructive approach is to preserve the normative core of values such as ren, li, and yi, while reinterpreting their conditions of application, modes of realization, and institutional carriers in light of digital society. On this basis, this paper proposes three interconnected pathways for transformation. The first is digital rituality, which responds to problems of interaction order in platform environments. The second is algorithmic benevolence, which responds to questions of value orientation in technological decision-making. The third is platform-based community, which responds to the problem of public good under conditions of virtual and hybrid social life. Together, these three pathways provide a preliminary framework for the transformation of Confucian ethics from embodied ethics to cyber ethics. The overall transformation from embodied ethics to cyber ethics can be conceptually illustrated as shown in [Figure 1](#).



**Fig. 1** A conceptual framework for the transformation from embodied ethics to cyber ethics. The figure illustrates how digital rituality, algorithmic benevolence, and platform-based community jointly mediate the reconfiguration of human, relations, space, and order under conditions of cyberspace.

## 5.1 Digital Rituality: Reconstructing Interaction Order in Cyberspace

Digital rituality seeks to translate the core spirit of *li* into an institutional principle for order in digital environments. In the Confucian tradition, *li* is not merely a set of ceremonial rules. It is a mechanism for coordinating roles, relations, and behavioral boundaries. Its function is to balance individual freedom and communal order through differentiated and context-sensitive forms of regulation. Cyberspace does not remove the need for such order. On the contrary, anonymity, decontextualization, and high mobility make its reconstruction even more necessary. Digital rituality therefore does not mean copying traditional rites into online settings. It means transforming the public, restrained, and context-sensitive spirit of *li* into principles for rule design and governance in digital interaction.

Algorithmic transparency is a basic requirement of digital rituality. Traditional Confucian thought places strong emphasis on the rectification of names. Its deeper meaning is that names and realities should correspond, rules should be knowable, and order should be intelligible. If names are not correct, speech becomes disordered and action loses coherence. In a similar way, many digital platforms today operate through opaque systems of recommendation, moderation, visibility ranking, and account restriction. Users often do not know why content is promoted, downgraded, or removed. Nor do they clearly understand how their data are used. This opacity weakens the legitimacy of digital order. For this reason, digital rituality requires at least partial disclosure of core platform rules, stronger possibilities for external audit, and more intelligible forms of explanation, so that users can understand how order is produced and how decisions affect them [Cheney-Lippold \(2011\)](#); [Mittelstadt et al. \(2016\)](#).

User participation expresses the consultative dimension of digital rituality. Confucian order is not based solely on command and submission. It also depends on moral education, discussion, and shared recognition. Historical practices such as community compacts suggest that social order gains stability when those subject to rules can also participate in shaping and interpreting them. In digital settings, this spirit can be translated into stronger participatory rights for users. When users are restricted or penalized because of algorithmic judgment, platforms should offer meaningful explanations and channels for review. At a broader level, digital governance can also explore mechanisms through which users, platform operators, and outside experts jointly participate in revising rules and evaluating their effects. In this way, governance can move away from pure technical unilateralism and toward a more limited form of co-governance [Suzor \(2019\)](#).

Digital identity ethics is a further component of digital rituality. Online anonymity can protect privacy and freedom of expression, but it also reduces accountability and lowers the cost of harmful conduct. Rather than eliminating anonymity, digital rituality calls for a layered approach: in high-risk areas such as public communication or political participation, stronger identity verification may be justified; in private communication or artistic expression, broader anonymous space may remain appropriate. In this sense, digital rituality does not seek to reproduce traditional rites but

to rebuild legitimacy, moderation, and relational responsibility in cyberspace through contextually calibrated institutional design.

## 5.2 Algorithmic Benevolence: Embedding Value Orientation into Technological Decision-Making

Algorithmic benevolence seeks to embed the caring orientation of *ren* into the design, deployment, and correction of algorithmic systems. In Confucian ethics, *ren* is not a general sentiment of kindness. It involves sensitivity to the condition of others, responsibility for the consequences of one's actions, and restraint against purely instrumental reasoning. As algorithms are increasingly used in healthcare, law, education, finance, and public administration, technological systems are exerting substantial influence over human lives. If these systems focus only on efficiency, accuracy, and risk minimization, while remaining insensitive to vulnerability and concrete human circumstances, they may become instruments of cold calculation rather than ethical support [Coeckelbergh \(2020\)](#); [Floridi \(2023\)](#). Algorithmic benevolence is proposed in response to this danger.

Context sensitivity is the first requirement of algorithmic benevolence. Confucian *ren* is never understood as an abstract and uniform form of concern. It is always expressed in concrete situations and through differentiated forms of understanding. Ideas such as teaching according to the student's aptitude show that moral attention must remain responsive to particular circumstances. By contrast, algorithmic systems often standardize complex human conditions into fixed variables and apply a single model across diverse cases. In areas such as healthcare, credit assessment, or social risk prediction, a person's actual situation may not be fully captured by standardized data categories. Algorithmic benevolence therefore requires stronger sensitivity to context. Systems should leave room for the recognition of individual difference, social support structure, and psychological condition, so that technological judgment does not become excessively mechanical [Eubanks \(2018\)](#); [Noble \(2018\)](#).

The preservation of final human responsibility is a basic institutional condition of algorithmic benevolence. Confucian thought insists that human beings must ultimately take responsibility for moral judgment. Tools may assist action, but they cannot replace the moral subject. In high-risk fields, algorithms may support the organization of information, the identification of risk, and the generation of recommendations. However, they should not become final arbiters. A more appropriate model is one of human-machine collaboration in which trained professionals retain the authority to review, revise, or reject system outputs. Whether in judicial decision-making, medical diagnosis, or educational evaluation, the final act of judgment should remain connected to accountable human agents. This does not deny the usefulness of technology. It preserves the moral subjectivity that Confucian ethics regards as indispensable.

Explainability is another important condition. If algorithmic decisions remain entirely opaque, those affected cannot understand or meaningfully challenge system conclusions—undermining the moral dialogue and reciprocal reflection that Confucian ethics values [Mittelstadt et al. \(2016\)](#). Algorithmic benevolence does not imply that machines themselves possess *ren*. It means that technological systems should be

designed and governed in ways that respect persons, remain attentive to vulnerability, and remain conscious of broader social consequences.

### 5.3 Platform-Based Community: Reconstructing the Public Good in Digital Society

Platform-based community responds to the loss of public good and the weakening of communal spirit in digital society. In the Confucian ideal, society is not a collection of isolated individuals. It is an ethical community sustained by values such as trustworthiness, responsibility, and appropriateness. Concepts such as all-under-heaven for the public good and harmony without uniformity both suggest that social life should be oriented toward common flourishing rather than pure competition of interests. Yet under the conditions of platform capitalism and attention competition, digital spaces are increasingly organized as markets for traffic distribution and user capture rather than as settings for ethical life. The idea of platform-based community seeks to recover a value foundation for public life under these conditions.

A platform-based community must move from traffic-based connection to value-based connection. Many platforms currently use recommendation systems to intensify emotional resonance, information cocoons, and short-term stimulation. Users gather around common preferences or shared sentiments, but not necessarily around enduring forms of value recognition. Such communities may be highly active, but they often lack stable responsibility and deeper ethical commitment. To change this, platform design should not serve only the growth of attention metrics. It should also encourage longer-term communities built around themes such as public service, education, environmental protection, knowledge sharing, and mutual aid. In this way, digital connection can gradually move from momentary stimulation to sustained common concern [Benkler \(2006\)](#); [Rheingold \(2000\)](#).

Platform-based community also requires the cultivation of new forms of digital affection and responsibility. In Confucian thought, many ethical values first emerge within concrete relations such as family and friendship. Yet their deeper significance is not confined to blood ties or local communities. In digital society, these values may be reinterpreted through new forms of quasi-kinship and mutual support. Platforms can foster this process through mechanisms such as memorial modes, mutual-aid groups, mentorship structures, and long-term companionship programs. These relationships are not identical to traditional kinship, but they may still carry forms of care, transmission, and reciprocal support that resonate with Confucian ethical concerns [Bailenson \(2018\)](#).

Cross-platform collaboration is necessary if platform-based community is to become institutional rather than merely aspirational. Because the self-management of a single platform cannot sustain stable digital community, a more promising direction is to develop shared ethical norms across platforms through cooperation among governments, enterprises, scholars, and user representatives—establishing a minimal common basis for digital order under the principle of harmony without uniformity [Hoffmann-Riem \(2019\)](#).

The core of platform-based community is therefore not the creation of stronger platform loyalty. It is the reconstruction of public good in digital environments. Only when

platforms begin to function not merely as attention markets but also as spaces of ethical life can Confucian values such as balancing justice and interest regain institutional support in the age of cyberspace.

## 6 Case Analysis: The Practical Difficulties and Transformative Possibilities of Confucian Ethics in Digital Contexts

To examine the interpretive value and practical relevance of the concepts proposed above, this section analyzes three representative digital contexts, as summarized in Table 4: online violence on social platforms, the shaping of cognitive structure by recommendation systems, and identity and responsibility in metaverse-like environments. These cases are selected because they correspond to three key dimensions of the preceding discussion, namely interaction order, value orientation, and community governance. Together, they illustrate both the practical difficulties that Confucian ethics faces in digital society and the possible directions of its transformation.

**Table 4** Case Analysis of the Practical Difficulties and Transformative Possibilities of Confucian Ethics in Digital Contexts

Case	Central problem	Existing practical response	Main implication for Confucian transformation
Online violence on social platforms	Disordered interaction under anonymity, amplification, and weakened accountability	Reputation scoring, behavioral restriction, and automated moderation	Digital rituality must combine technical regulation with procedural fairness, contextual judgment, and appeal mechanisms
Recommendation systems and cognitive shaping	Personalized feeds distort moral extension and narrow exposure to difference	Limited insertion of heterogeneous or public-interest content	Algorithmic benevolence requires multi-objective design beyond traffic maximization
Metaverse-like environments and identity disorder	Fragmented identity, blurred responsibility, and weakened community continuity	Unified reputation systems and cross-context conduct tracking	Platform-based community must balance responsibility, privacy, plural norms, and consultative governance

Note: The cases do not function merely as illustrations. They also test the practical plausibility of the three transformation pathways proposed in this paper by showing both their normative promise and their institutional limits.

### *Scope and limitations of the case analysis.*

The three cases analyzed below are drawn primarily from the Chinese digital environment, including platforms such as Weibo, WeChat, and Zhihu. This focus is theoretically motivated: Confucian ethics originates within Chinese intellectual traditions, and its articulation in platform-governance terms is most directly traceable in contexts where it has historically shaped normative culture. At the same time, this constitutes a methodological limitation requiring acknowledgment. The structural tensions identified here—between algorithmic regulation and ethically grounded order, between weak digital ties and differentiated relational responsibility—are broadly shared phenomena, but their specific manifestations and institutional responses will vary across the European regulatory environment, North American liberal democratic contexts, and the Confucian-influenced societies of East and Southeast Asia [van Dijk et al. \(2018\)](#); [Zuboff \(2023\)](#). The three concepts proposed in this paper are intended as general normative frameworks; their operationalization across different cultural and institutional settings remains an important task for future comparative research.

## **6.1 Online Violence on Social Platforms and the Practical Attempt at Digital Rituality**

Online violence on social platforms reveals the problem of disordered interaction in digital environments. In recent years, these platforms have repeatedly witnessed practices such as doxxing, malicious defamation, group attacks, and stigmatizing speech. These phenomena suggest that forms of order once sustained through public evaluation, familiar social ties, and moral education have become much weaker under conditions of anonymity, high mobility, and rapid digital dissemination. At the most basic level, this is not simply a problem of individual behavior. It is the result of the combined effects of technical amplification, weakened accountability, and the erosion of ethical restraint.

Some platforms have already begun to experiment with technical means for rebuilding a form of digital rituality. For example, the “friendliness score” system introduced by Weibo attempts to identify insulting language, malicious interaction, and abnormal reporting behavior, and then assigns dynamic reputation scores to users. Users with low scores may be restricted in commenting or posting. In formal terms, this kind of design bears some resemblance to a Confucian logic of order, because it attempts to reconstruct behavioral boundaries through ongoing evaluation and community pressure. Its basic structure is not entirely unrelated to the moral evaluation mechanisms found in local community compacts or other forms of small-scale social regulation. In this sense, platforms are not entirely without normative awareness. They are trying, in digital form, to restore interactional norms that have lost some of their force.

However, these practices still remain at a considerable distance from a richer concept of digital rituality. First, algorithmic judgment often lacks adequate sensitivity to context. It is difficult for automated systems to distinguish irony, satire, criticism, and actual aggression with sufficient precision. As a result, complex forms of expression may be reduced to simple risk signals, which conflicts with the Confucian emphasis on balancing stable norms with contextual judgment. Second, platform sanctions

often remain limited to functional restrictions, while offering insufficient explanation, appeal, or mechanisms of repair. Users who are wrongly judged may find it difficult to defend themselves, and this may in turn deepen resentment and antagonism. Third, when users suffer reputational harm because of algorithmic misjudgment, platforms may invoke claims of technical neutrality in order to avoid responsibility. This sits uneasily with the Confucian expectation that action, judgment, and responsibility should remain connected [Taddeo and Floridi \(2016\)](#).

For this reason, the real transformation implied by digital rituality must involve a combination of technical governance and human deliberation. A more workable model is not simply stronger machine punishment. It is a layered structure of governance. Explicitly harmful content such as personal attacks, pornography, or deliberate incitement may be handled rapidly by automated systems. More ambiguous cases that depend on semantics and context should involve human review and situational interpretation. Cases that remain contested should also be accompanied by appeal procedures and community-based mechanisms of mediation. Only when platform governance moves beyond pure efficiency and includes public rules, procedural fairness, and possibilities of relational repair can the Confucian spirit of *li* acquire substantive meaning in digital society.

## **6.2 Recommendation Systems, the Distortion of Differentiated Care, and the Corrective Possibility of Algorithmic Benevolence**

Recommendation systems are reshaping users' cognitive environments and thereby affecting the Confucian mechanism of moral extension. On short-video and content platforms, recommendation systems are usually optimized through variables such as viewing time, likes, comments, and sharing. Their basic aim is to maximize attention and user retention. Under these conditions, users are continuously surrounded by content that reflects similar interests, emotional styles, and viewpoints. This often produces information cocoons and echo chambers [Pariser \(2011\)](#). From a Confucian perspective, the central issue is not merely whether information is abundant. It is whether individuals can still encounter difference, understand the situations of others, and extend concern beyond their immediate perspective.

Some platforms have already begun to explore ways of introducing a weak form of algorithmic benevolence. For example, certain systems insert a limited proportion of heterogeneous content into otherwise personalized feeds. Such content may include documentaries about vulnerable groups, public-interest campaigns, cross-cultural dialogue, or educational material. The significance of this practice lies in the fact that the recommendation system is no longer treated as a purely neutral traffic tool. It begins to assume a minimal value-guiding function. From a Confucian point of view, this can be interpreted as a weak institutional form of *ren*, because it tries to create conditions in which users may approach others, encounter difference, and develop forms of sympathy.

This tendency has some promise, but it also faces structural limits. On the positive side, the inclusion of heterogeneous content may broaden users' horizons and encourage new forms of understanding and public concern. On the negative side, users do

not necessarily welcome such interventions. Some may regard this content as irrelevant or disruptive and may choose to disable related functions. In addition, public-interest content usually does not possess the same traffic advantage as entertainment content. This creates an enduring tension between social responsibility and commercial incentive. A deeper problem concerns definition and authority. What kinds of content count as beneficial heterogeneity, and who decides its proportion, limit, and evaluation criteria? These are not merely technical questions. They are normative questions.

For this reason, the practical development of algorithmic benevolence cannot remain at the level of content insertion alone. A more stable approach would be to establish multi-objective recommendation mechanisms. Such systems would not optimize only for click-through rates or retention, but would also give limited weight to public value, diversity, and social influence. At the same time, algorithmic ethics assessment, public-content incentive mechanisms, and external oversight procedures are needed if platforms are to preserve minimal value constraints beyond commercial logic [Morley, Floridi, Kinsey, and Elhalal \(2020\)](#). In this sense, algorithmic benevolence does not require algorithms to become morally human. It requires the institutional goals and technical architecture of algorithmic systems to leave room for a human-centered ethical orientation.

### **6.3 Identity Disorder in Metaverse-Like Environments and the Difficulty of Building Platform-Based Community**

Metaverse-like environments reveal concentrated problems of fragmented identity, blurred responsibility, and weakened community. In such environments, users may possess multiple digital identities at the same time and move freely across different social scenes. A person may act as a cooperative public-minded contributor in one setting while behaving aggressively or destructively in another. This structure of multiple identities and cross-context mobility greatly complicates the Confucian model of ethical life, which depends on relatively stable identity, clearer objects of responsibility, and more enduring forms of communal recognition.

Some decentralized platforms have already tried to rebuild responsibility through unified reputation systems. In these settings, users' transactional credibility, civility of speech, community contribution, and records of violation across different virtual scenarios may be integrated into cross-context indicators of reputation. These indicators may then be linked to access to resources, participation rights, or community authority. At the level of design logic, such efforts bear a certain resemblance to the Confucian idea that status and moral worth should remain connected. They attempt to ensure that although identities may vary, long-term conduct still produces traceable moral consequences. In this sense, platforms are exploring ways to re-establish the principle that responsibility should not disappear simply because identity changes.

Such systems show one possible direction for building platform-based community, but they also bring serious risks. On the positive side, unified reputation can strengthen continuity of responsibility and reduce the possibility that one may act destructively in one place and escape consequence in another. It can also encourage users to consider long-term standing rather than short-term release. On the negative side, several deep difficulties remain. First, there is an internal tension between anonymity and

responsibility. Many users wish to preserve privacy and do not want all their actions in different contexts to be comprehensively linked. Second, standards of evaluation differ across cultures and across communities. The same act may be interpreted very differently in different normative settings. Third, if reputation systems are controlled by a single platform or central authority, they may easily become instruments of excessive surveillance and digital domination.

For this reason, the key to platform-based community is not merely the creation of a reputation score. What is needed is a more public and consultative structure of governance. A more desirable direction is to combine distributed identity mechanisms, selective reputation disclosure, and multi-level community governance while still protecting privacy. In this way, users are neither fully exposed to centralized control nor allowed to escape responsibility without limit. At the same time, different cultural settings, different platform types, and different community goals should be allowed to maintain differentiated normative spaces. Platform-based community therefore cannot be reduced to a technical rating device. It must emerge through the combined development of responsibility mechanisms, consultative rules, and publicly oriented value commitments.

## 7 Conclusion

This paper has examined how the rise of cyberspace challenges the Confucian understanding of human beings, relations, space, and order. It argues that the digital age does not render Confucian ethics obsolete. Rather, it changes the conditions under which its core categories must be interpreted and applied.

Using Cyberism as the analytical framework, the paper has shown that Confucian philosophy faces three interrelated challenges in digital society. These concern the boundary of moral subjectivity, the ethical basis of social relations, and the normative foundation of public order. In response, it has proposed three corresponding pathways for reconstruction, namely digital rituality, algorithmic benevolence, and platform-based community.

The broader claim of this paper is that Confucian ethics can still provide meaningful normative resources for contemporary digital society. Its value lies not in offering ready-made solutions, but in contributing a distinct ethical perspective on technological governance, social responsibility, and the public good.

At the same time, the present discussion remains preliminary. Further research is needed to test these concepts through more detailed case analysis and to clarify their institutional and technical feasibility. Even so, this study suggests that rethinking Confucian philosophy in relation to cyberspace is not only a matter of philosophical reinterpretation, but also part of the wider effort to normatively orient human life in the digital age.

## Data Availability

This study contains no primary empirical data. As a work of theoretical and philosophical analysis, no datasets were generated or analysed.

## References

- Ames, R.T., & Rosemont, J., H. (2010). *The Analects of Confucius: A philosophical translation*. New York: Ballantine Books.
- Bailenson, J. (2018). *Experience on demand: What virtual reality is, how it works, and what it can do*. New York: W. W. Norton & Company.
- Bell, D.A. (2010). *China's new Confucianism: Politics and everyday life in a changing society*. Princeton: Princeton University Press.
- Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. New Haven: Yale University Press.
- Bostrom, N. (2014). *Superintelligence: Paths, dangers, strategies*. Oxford: Oxford University Press.
- Castells, M. (2011). *The rise of the network society*. Hoboken: John Wiley & Sons.
- Cheney-Lippold, J. (2011). A new algorithmic identity: Soft biopolitics and the modulation of control. *Theory, Culture & Society*, 28(6), 164–181, <https://doi.org/10.1177/0263276411424420>
- Coeckelbergh, M. (2020). *AI ethics*. Cambridge, MA: MIT Press.
- Cohen, J.E. (2019). The age of surveillance capitalism: The fight for a human future at the new frontier of power [Book review]. *Surveillance & Society*, 17(1/2), 240–245,
- Crawford, K. (2021). *Atlas of AI: Power, politics, and the planetary costs of artificial intelligence*. New Haven: Yale University Press.
- de Souza e Silva, A. (2006). From cyber to hybrid: Mobile technologies as interfaces of hybrid spaces. *Space and Culture*, 9(3), 261–278, <https://doi.org/10.1177/1206331206289022>
- Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. New York: St. Martin's Press.
- Fei, X. (1998). *Xiangtu Zhongguo [From the soil]* (1st ed.). Beijing: Peking University Press. (In Chinese)
- Floridi, L. (2023). *The ethics of artificial intelligence: Principles, challenges, and opportunities*. Oxford: Oxford University Press.

- Friedman, B., Kahn, P.H., Borning, A. (2008). Value sensitive design and information systems. K.E. Himma & H.T. Tavani (Eds.), *The handbook of information and computer ethics* (pp. 69–101). Hoboken: Wiley.
- Haraway, D. (2013). A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century. S. Stryker & S. Whittle (Eds.), *The transgender studies reader* (pp. 103–118). New York: Routledge.
- Hoffmann-Riem, W. (2019). Artificial intelligence as a challenge for law and regulation. T. Wischmeyer & T. Rademacher (Eds.), *Regulating artificial intelligence* (pp. 1–29). Cham: Springer.
- Hongladarom, S. (2007). Analysis and justification of privacy from a buddhist perspective. S. Hongladarom & C. Ess (Eds.), *Information technology ethics: Cultural perspectives* (pp. 108–122). Hershey: IGI Global.
- Lanier, J. (2018). *Ten arguments for deleting your social media accounts right now*. New York: Henry Holt and Company.
- Lefebvre, H. (2014). The production of space. J.J. Gieseking & W. Mangold (Eds.), *The people, place, and space reader* (pp. 289–293). New York: Routledge. (Original work published 1991)
- Lessig, L. (2006). *Code: And other laws of cyberspace*. New York: Basic Books.
- Liang, S. (2006). *Dongxi wenhua jiqi zhexue [Eastern and western cultures and their philosophies]* (1st ed.). Beijing: Zhonghua Book Company. (In Chinese)
- Mittelstadt, B.D., Allo, P., Taddeo, M., Wachter, S., Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), , <https://doi.org/10.1177/2053951716679679>
- Morley, J., Floridi, L., Kinsey, L., Elhalal, A. (2020). From what to how: An initial review of publicly available AI ethics tools, methods and research to translate principles into practices. *Science and Engineering Ethics*, 26(4), 2141–2168, <https://doi.org/10.1007/s11948-019-00165-5>
- Ning, H. (2025). Cyberism: The theory for relationships between human and cyberspace. *Chinese Journal of Engineering*, 47(6), 1240–1256,
- Ning, H., Liu, H., Ma, J., Yang, L.T., Huang, R. (2016). Cybermatics: Cyber–physical–social–thinking hyperspace based science and technology. *Future Generation Computer Systems*, 56, 504–522, <https://doi.org/10.1016/j.future.2015.07.012>

- Ning, H., Yin, R., Ullah, A., Shi, F. (2021). A survey on hybrid human-artificial intelligence for autonomous driving. *IEEE Transactions on Intelligent Transportation Systems*, 23(7), 6011–6026, <https://doi.org/10.1109/TITS.2021.3074245>
- Noble, S.U. (2018). *Algorithms of oppression: How search engines reinforce racism*. New York: New York University Press.
- Pariser, E. (2011). *The filter bubble: What the internet is hiding from you*. London: Penguin Press.
- Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information*. Cambridge, MA: Harvard University Press.
- Rheingold, H. (2000). *The virtual community: Homesteading on the electronic frontier* (Rev. ed.). Cambridge, MA: MIT Press.
- Solove, D.J. (2004). *The digital person: Technology and privacy in the information age*. New York: NYU Press.
- Suler, J. (2004). The online disinhibition effect. *CyberPsychology & Behavior*, 7(3), 321–326, <https://doi.org/10.1089/1094931041291295>
- Suzor, N.P. (2019). *Lawless: The secret rules that govern our digital lives*. Cambridge: Cambridge University Press.
- Taddeo, M., & Floridi, L. (2016). The debate on the moral responsibilities of online service providers. *Science and Engineering Ethics*, 22(6), 1575–1603, <https://doi.org/10.1007/s11948-014-9537-8>
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.
- Vallor, S. (2016). *Technology and the virtues: A philosophical guide to a future worth wanting*. Oxford: Oxford University Press.
- van Dijck, J. (2014). Datafication, dataism and dataveillance: Big data between scientific paradigm and ideology. *Surveillance & Society*, 12(2), 197–208, <https://doi.org/10.24908/ss.v12i2.4776>
- van Dijck, J., Poell, T., de Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford: Oxford University Press.
- Yang, L., & Zhao, J. (2018). *Jiu bang xin ming yu Zhongguo zhexue [Old country, new mission and Chinese philosophy]* (1st ed.). Beijing: Social Sciences Academic

Press. (In Chinese)

Yeung, K. (2019). ‘Hypernudge’: Big data as a mode of regulation by design. *The social power of algorithms* (pp. 118–136). New York: Routledge.

Zhao, T. (2005). *Tianxia tixi: Shijie zhidu zhexue daolun [The tianxia system: An introduction to the philosophy of a world institution]*. Nanjing: Jiangsu Education Publishing House. (In Chinese)

Zuboff, S. (2023). The age of surveillance capitalism. *Social theory re-wired* (pp. 203–213). New York: Routledge.