

Digital Communication Ethics from a Sufi Perspective: The Takhalli-Tahalli-Tajalli Model Against Information Disorder

Moh. Saifulloh*

Departemen Studi Pembangunan, Institut Teknologi Sepuluh Nopember (ITS), 60111, Surabaya, Indonesia
saiful@its.ac.id saifultauchid@gmail.com

Samsuriyanto

Departemen Studi Pembangunan, Institut Teknologi Sepuluh Nopember (ITS), 60111, Surabaya, Indonesia
samsuriyanto@its.ac.id

Abstract

This research aims to formulate a digital communication ethics framework by transposing the classical Sufi model of *Takhalli* (cleansing), *Tahalli* (beautifying), and *Tajalli* (manifestation) from Imam Al-Ghazali and Imam Al-Jailani. In the contemporary cyber era, conventional legal-structural and techno-centric paradigms function merely as reactive, external controls that fail to address the psychological motives behind information disorder. This study benefits digital society by shifting the mitigation paradigm from reactive containment to internal, preventive self-regulation. Methodologically, this study adopts an interpretivist paradigm using a qualitative critical literature review integrated with Gadamerian Philosophical Hermeneutics. The results demonstrate that the framework operates as a closed-loop cybernetic system. Specifically, *Takhalli* purges *kizb*, *hasad*, and *riya'*. This qualifies *Tahalli* to implement two-tiered behavioral interventions via *Sidq and Rahmah*. Ultimately produces *Tajalli*—manifesting as “Digital *Ihsan*” anchored by *Digital Muraqabah*. Although platform anonymity poses structural limitations at the cyber-deindividuation threshold, this model permanently breaks the supply chain of toxic information.

Keywords: *Digital Communication Ethics, Sufism, Takhalli-Tahalli-Tajalli, Information Disorder, Digital Muraqabah.*

1. Introduction

The current development of global cyber interconnection technologies has propelled human civilization. This has moved us into an era of limitless information flow. Simultaneously exposes structural

vulnerabilities within the human psyche (Saifulloh & Samsuriyanto, 2026; Muris et al., 2025). Cyberspace is characterized by its anonymous, free, and fluid nature. It is currently experiencing an escalation of digital communication pathologies, commonly conceptualized as information disorder. This disorder encompasses misinformation, disinformation, and malinformation (Wardle & Derakhshan, 2017). On social media platforms, these macro-structural disruptions manifest at the micro-behavioral level as specific spiritual and ethical deviations. These deviations include *kizb* (lies and hoaxes), *hasad* (negative and hostile commenting), and *riya'* (validation-seeking behavior). The manifestation of this toxic behavior compromises the deliberative integrity of the digital public sphere. It also introduces significant psychosocial stressors across global user networks (Smout et al., 2026).

To manage these digital disruptions, technology corporations and digital authorities have primarily attempted to resolve this crisis through architectural and policy-driven interventions. This strategy is colloquially referred to as a “technofix” approach (Sætra & Selinger, 2024). These technical interventions include application feature updates and user interface modifications. They also involve stricter content moderation and the implementation of filtering Artificial Intelligence (AI). These mechanisms provide essential operational controls and handle massive quantities of data. However, they function primarily as external boundary-setting tools that manage the outward flow of information. Instead, addressing the behavioral motives or ethical choices of the individuals producing that content (Rofiq & Samsuriyanto, 2025).

From an epistemological standpoint, the root of cyber communication crises is not systemic or algorithmic failure. However, rather than moral decay, egoistic impulsivity (*nafs*), and a human spiritual void (Wahyuddin et al., 2023; Pohlmeier-Esch et al., 2025). No matter how advanced, technology will never be able to detoxify an ego experiencing a disorientation of spiritual values. Consequently, this digital moral crisis can only be thoroughly mitigated through *tazkiyatun nafs* (purification of the soul). Serves as an internal ethical circuit breaker to cleanse destructive motives before they manifest as a click or a post (Hawwa, 1999). Without the inner sterilization of the communicator, cyberspace will continue to exponentially produce information pollution that structural frameworks cannot prevent.

The study of mitigating information disorder and cyberspace governance in contemporary academic literature is currently dominated by two primary frameworks. These frameworks are the legal-structural paradigm and the techno-centric paradigm. Within the legal-structural domain, research heavily emphasizes state jurisprudence, institutional

compliance, and formal regulatory frameworks. These frameworks include Indonesia's Electronic Information and Transactions Law (*UU ITE*) (Jahanabadi et al., 2023) (Joyce, 2025). While these legal structures establish important punitive and deterrent mechanisms, they operate primarily in a curative and reactive manner. Specifically, they penalize social damage or horizontal polarization only after the content has already been disseminated (Pöyhönen & Lehto, 2024).

Concurrently, the techno-centric paradigm improves infrastructural resilience through vulnerability indices. This improvement is achieved by deploying advanced technical defense tactics like Zero Trust protocols (Lehto & Pöyhönen, 2026). However, when translated into educational programs, this framework often results in a strictly cognitive and operational digital literacy curriculum. This type of curriculum trains users in technical verification skills without addressing the psychological or behavioral impulses behind toxic message production (Gilad & Tishler, 2024).

This study aims to resolve the conceptual gap left by conventional studies. These conventional studies treat Islamic communicative injunctions purely as external normative rules. Synthesizing the classical *tasawuf amali* (practical Sufism) framework of Imam Al-Ghazali and Imam Al-Jailani is highly justified. This framework provides a Systematic psychological foundation regarding the sequential stages of *Takhalli* (purging verbal vices or *afat al-lisan*), *Tahalli* (beautifying the heart with virtues), and *Tajalli* (the manifestation of divine consciousness) to discipline the *nafs*. This framework demonstrates that outward communicative quality directly mirrors the internal heart landscape (Al-Ghazali, 2012). Concurrently, Al-Jailani (2018) operationalizes these three mystical stages into active ethical codes. These codes bridge transcendental devotion with social interactions, providing a practical methodology to transform inner character and resist moral deviations. Combining both models establishes a robust, internal self-regulatory framework that directly targets user intentionality at its root. This combination transforms the cyber mitigation paradigm from reactive-structural to preventive-spiritual.

This study aims to address the root causes of information disorder. To achieve this, it investigates the integrated classical Sufi stages of *Takhalli*, *Tahalli*, and *Tajalli* from Al-Ghazali (2012) and Al-Jailani (2018). These stages can be operationalized into a self-regulatory model for digital communication ethics. Additionally, this study explores the ways that this framework provides a preventive mechanism. This mechanism works against the generation and spread of information disorder on social media platforms. Accordingly, the primary objective of this study is to formulate

an integrated “Sufistic Communication” paradigm by transposing these traditional stages into specific digital behaviors (Abu al-Naja, 2025).

This paper avoids treating these stages as abstract concepts. Instead, it operationalizes *Takhalli* as the active purging of communicative pathologies, such as consciously halting the spread of unverified text. Furthermore, it defines *Tahalli* as the systematic cultivation of digital virtues such as rigorous fact-checking or *tabayyun*. Finally, *Tajalli* is conceptualized as the resulting formation of an ethical, socially responsible digital environment. Ultimately, this research aims to move beyond purely reactive-structural measures. It seeks to scientifically prove that inner purification based on *Digital Muraqabah* (divine self-vigilance) is capable of breaking the supply chain of toxic information. Furthermore, this purification can neutralize manipulative algorithms and restore human verbal integrity in cyberspace sustainably.

2. Method

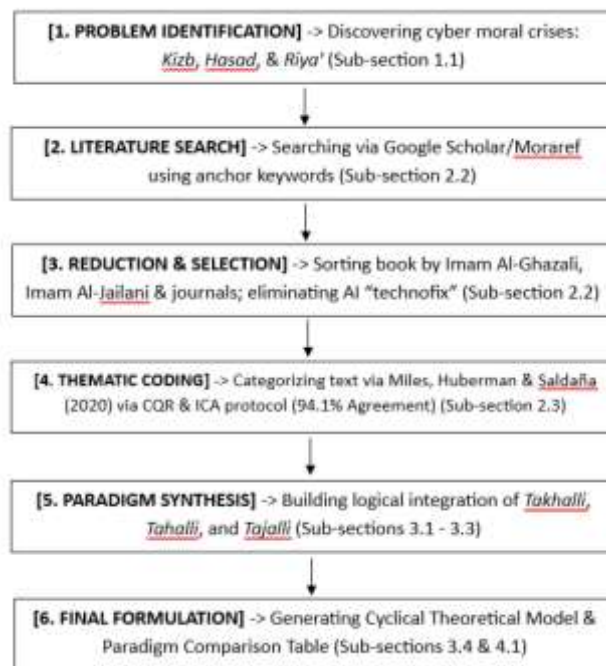


Figure 1. Research Flowchart

2.1. Research Design and Epistemological Stance

This study employs a non-interventional qualitative design with a critical literature review approach. This approach is integrated with Gadamerian Philosophical Hermeneutics to construct a new paradigm in digital communication ethics. Epistemologically, this research is grounded

in the Interpretivism paradigm. Posits that social reality and texts are not singular. However, dynamically constructed through deep meaning-making. Through the lens of interpretivism, classical medieval Sufism texts are isolated not as static historical documents. However, these texts serve as living sources of knowledge that can be dissected, explored, and reinterpreted. They are analyzed through a “fusion of horizons” to solve contemporary communication pathologies in cyberspace (Alharahsheh & Pius, 2020).

This approach focuses on conceptual reconstruction by bridging the Islamic mystical tradition (*tazkiyatun nafs*). It connects this tradition with modern, mechanistic cyber communication realities. The researcher acts as the primary instrument in performing textual deconstruction on Islamic esoteric teachings. This process aims to generate new sociological-psychological understandings. With this epistemological stance, the results of this research manage subjective interpretation through strict Epistemic Reflexivity and Bracketing (*Epoché*). This approach ensures that text analysis is based on an objective, consistent, and academically measurable scientific reporting framework. Ultimately, this framework aims to shift external control into internal cyber control.

2.2. Literature Selection Procedure and Inclusion-Exclusion Criteria

The literature data collection procedure in this study was conducted through a systematic search on reputable national and global databases. These platforms include Google Scholar, Moraref, Scopus, and Sinta. This adjustment was made to ensure absolute transparency and logical rigor as requested by reviewers. Consequently, the data search combined specific advanced Boolean operators (AND, OR) alongside the established anchor keywords: (“*Islam and hoax narratives*” OR “*Islam and negative comment*” OR “*Islam and Thirst for Validation Social Media*” OR “*digital communication pathology*” OR “*cyberpsychopathology*”) AND (“*tazkiyatun nafs*” OR “*Al-Ghazali*” OR “*Al-Jailani*”).

The primary inclusion criterion for primary data is the mandatory use of original classical source books by prominent Sufism scholars. These sources specifically include *Kitab Ihya’ Ulumuddin* by Imam Al-Ghazali and *Kitab Al-Fath ar-Rabbani wa al-Faidh ar-Rahmani* by Imam Al-Jailani. This strict selection is required to guarantee the authenticity of the text’s scholarly authority. Furthermore, this approach helps avoid personal data selection bias from the researcher.

Meanwhile, the inclusion criteria for secondary data are reputable journal articles (recent timeframe, such as 2020–2026). These selected articles must examine the phenomena of cancel culture, psycholinguistics, online reactive behavior, ITE Law regulations, and digital anarchy mitigation. Exclusion criteria in this research are strictly applied by

dropping the literature. The excluded works are those that only discuss technical infrastructure improvements, application interface updates, or commercial AI filtering algorithms (technofix digital governance). This restriction is theoretically justified because technofix studies focus on external infrastructure coercion. Instead, the human interior moral agency and spiritual emptiness aspects of humans in cyberspace.

2.3. Systematics of Data Analysis and Coding Procedure

Data analysis in this study applies the Interactive Model from Miles, Huberman, and Saldaña (Miles et al., 2020). Explicitly adapted for conceptual textual analysis as a cyclical and continuous process through three simultaneous main streams. The first stage begins with data condensation. The process of selecting, focusing, simplifying, and transforming textual data obtained from the primary books and cyber articles. At this stage, all texts are comprehensively compiled. They are then cleaned of irrelevant information to isolate specific data directly related to the issue of communication pathology.

The second stage is data display, where the condensed data is organized into a systematic form. This organization makes the data easy to understand and ready to be interpreted. Furthermore, the data is classified thematically into a conceptual matrix. This matrix is based on the three major axes of Sufi ethics: spiritual purging (*Takhalli*), moral adornment (*Tahalli*), and the actualization of divine consciousness (*Tajalli*).

The final stage is conclusion drawing and verification to make sense of the displayed data to produce theoretical findings. In this stream, the researcher identifies patterns, causal flows, and scientific propositions. These elements connect the phenomenon of communication pathology and the mapped Sufi ethical framework. The emerging initial conclusions are then strictly verified through a review of the source data. This verification process ultimately produces a valid final conclusion formulation. This final product presents a theoretical reconstruction of cyber communication ethics.

The coding procedure is strictly performed to transform qualitative text into scientific units of analysis. This process uses clear labels such as SUFI-PURG-PATH and SUFI-VIRT-ACTV. As a brief example, the researcher analyzes the text in *Ihya' Ulumuddin*. In this text, Al-Ghazali (2012) categorizes the dimensions of honesty into six profound manifestations. These dimensions encompass truthfulness in speech, intention, ambition, the fulfillment of goals, actions, and the attainment of all religious standings. Similarly, Al-Jailani (2018) in *Al-Fath ar-Rabbani wa al-Faidh ar-Rahmani* emphasizes breaking the ego and speaking truth to social reality. This text is extracted and assigned the code or label "Hoax

Filter” (Category: *Tahalli - Sidq/Tabayyun*). This is because the concept of *tabayyun* (information confirmation/verification) dominantly and most accurately fits into the first dimension, namely Truthfulness in Speech. Through this systematic coding validation, the data analysis process is guaranteed to be transparent. It is also free from groundless subjective opinions. Furthermore, the process possesses high scientific traceability.

3. Results

3.1. Analytical Codification of Takhalli as an Epistemic Filter Against Complex Digital Pathologies

The textual condensation of Al-Ghazali (2012) and Al-Jailani (2018) does not act as a static moral sermon. It reveals that *Takhalli* (intentional spiritual purgation) functions as an active and structural “circuit breaker”. This function operates within the architecture of digital cognitive processing. In contemporary communication, data exposure happens faster than conscious reflection. This study codes and deconstructs classical spiritual ailments into specific, complex digital pathologies. This approach expands far beyond generic definitions of moral failing to address modern algorithmic environments.

3.1.1. Deconstructing Digital Kizb: From Structural Falsehoods to Algorithmic Disinformation

The textual analysis of Al-Ghazali (2012) establishes that the primary danger of *kizb* (lying) is not merely moral. However, epistemic: it creates a systematic distortion of reality (*al-jahal*) that leads the listener to fall into ignorance. Al-Jailani (2018) strongly warns against this by juxtaposing rational integrity with the fear of creation over the Creator. Translated into modern media ecology, this pathology manifests structurally as manufactured disinformation and hoaxes. When a digital agent practices *Takhalli*, the mechanism operates as an *epistemic vigilance filter*. It requires a radical deconstruction of the ego. This deconstruction is achieved by completely halting the production of false narratives, which are often manipulated for personal ambition or group interests (Murtiningsih & Adeoye, 2025). *Takhalli* plays an analytical role in cleansing the inner self from information pollution. This process restores verbal integrity so that it is no longer a source of intellectual damage to others.

3.1.2. Transmuting Hasad into Cyber-Aggression: Trolling, Doxxing, and Cancel Culture

The genealogy of *hasad* (envy) in classical texts identifies it as a complex manifestation of anger (*ghadhab*). Acts as the root of all malice and ruins the soul’s order (Al-Ghazali, 2012). Al-Jailani (2018) identifies

this as a trait of the arrogant whose faces are overturned in the fire of *Jahannam*. In cyber-ecosystems, this pathology escalates rapidly due to the *Online Disinhibition Effect*. This escalation weaponizes *hasad* into modern practices. These practices manifest as negative comments or character assassination within the cancel culture phenomenon (Islam et al., 2020). Through *Takhalli*, individuals undergo a systematic deconstruction of the desire to see others fail. *Takhalli* suppresses the destructive urge to bring down the dignity of others. In doing so, it serves as an inner emotional regulator that replaces concealed anger with firm, conscious self-control over digital interactions.

3.1.3. Reconceptualizing *Riya'* within the Attention Economy: Clout Chasing and Rage-Baiting

Classical texts define *riya'* (showing off) as a severe form of inner disobedience that taints the sincerity of intention before God (Al-Ghazali, 2012). Al-Jailani (2018) starkly illustrates this hypocrisy as wearing clean clothes while harboring a filthy heart. Within the digital public sphere, *Riya* aligns perfectly with the mandates of the Attention Economy. This alignment drives modern millennial Muslims into various digital traps. These traps include superficial recognition, manipulative content, and excessive personal branding (Zaid et al., 2022). Through the lens of *Takhalli*, this research demonstrates the method to handle spiritual issues. It shows that overcoming *riya'* requires a systematic detachment from algorithmic validation metrics. By deconstructing the need for human praise, *Takhalli* functions as a spiritual sterilization process. This process frees the user from dependency on virtual visibility and shift the communication motive back to authentic, divine values.

3.1.4. Operational Limitations and Counterexamples of Digital *Takhalli*

To meet strict academic rigor, this model acknowledges structural limitations where *Takhalli* may fail to suppress digital pathologies. First, the *anonymity factor* of internet architecture (e.g., alter accounts) lowers the psychological cost of transgression. A user who exhibits high ethical discipline in physical spaces may suffer from *compartmentalized morality* online. In this digital space, the illusion of invisibility causes a temporary breakdown in their *Takhalli* mechanism. Second, modern social media platforms utilize *hyper-optimized dopamine loops* through push notifications. An individual is targeted by highly emotional and tailored misinformation. This targeted content causes the evolutionary survival response (fast thinking) to bypass the reflective spiritual filters of *Takhalli* (slow thinking). Therefore, *Takhalli* cannot operate in a structural vacuum; its practical success depends on being paired with systematic digital media literacy.

The success of this spiritual cleansing allows individuals to perform a thorough mental “detoxification”. This process takes place before they interact with the media. As a result, it ensures that the produced messages are free from negative emotional residues (Rofiq & Samsuriyanto, 2026).

Table 1. *Takhalli* as a Digital Detoxification Mechanism

Pathology Type	Core Impact & Digital Manifestation	Takhalli’s Detoxification Role
Kizb (Lying)	Logical misdirection, hoaxes, and disinformation.	Halts information pollution; restores narrative integrity.
Hasad (Envy)	Cyberbullying, trolling, and cancel culture.	Suppresses aggressive urges; enforces emotional self-control.
Riya’ (Showing Off)	Clout chasing, vanity metrics, and manipulative branding.	Sterilizes the soul from dependency on public praise.

3.2. Tahalli Internalization: The Transformation of Tabayyun Ethics in Message Processing

Following the systematic purification of digital pathologies through *takhalli*, the soul enters a new stage. The phase of *tahalli* actively populates the resulting psychological vacuum. It provides the vacuum with an operational framework of active digital ethics. Data analysis demonstrates that *Tahalli* functions as a two-tiered behavioral intervention program. This program shifts away from static moral descriptions into functional mechanisms. In this system, *sidq* (honesty) acts as the internal cognitive filter. Meanwhile, *rahmah* (compassion) governs the external communication output.

3.2.1. Internal Processing Level: *Sidq* (Honesty) as a Cognitive Filter

Analysis reveals that honesty (*sidq*) serves as a rigorous cognitive defense mechanism. This mechanism protects against *kizb* (information disorder, including fabricated content and viral hoaxes). While Al-Ghazali (2012) identifies six critical dimensions of honesty. Ranging from truthfulness in speech and intention to actions and religious standings. Applying this framework to digital interfaces necessitates an active validation process rather than passive information intake.

The internalization of *sidq* fundamentally reconfigures the user’s data-processing behavior. The spiritual weight of honesty prevents passive message consumption. This internal drive mechanically steers the user toward *tabayyun* (rigorous source validation and data auditing). This

structural transition aligns with the classical framework of Al-Jailani (2018). He argues that spiritual vigilance requires strict containment of both spoken and unspoken words. This discipline is necessary due to continuous divine surveillance over human consciousness.

When users operationalize this transcendental awareness (*muraqabah*), information processing is transformed. Incoming messages are no longer accepted based on emotional confirmation bias. Instead, data must withstand empirical testing before being integrated or shared (Prihantoro & Mustafid, 2023). Consequently, *Sidq* establishes a cognitive firewall against the reproduction of systemic digital falsehoods.

3.2.2. External Output Level: *Rahmah* (Compassion) as an Antidote to Digital Aggression

While *sidq* regulates internal data reception, compassion (*rahmah*) dictates the external output of digital interactions. In contemporary networks, we observe the erosion of empathy. This decline fuels macro-pathologies such as *cyberbullying*, *trolling*, and *flaming*. To neutralize this toxicity, Al-Ghazali (2012) highlights mutual love, compassion, and the systematic cultivation of social brotherhood. He views this approach as the optimal path for drawing closer to divine perfection (*taqarrub*).

In digital spaces, *rahmah* manifests through the deliberate use of *qaulan layyina* (gentle, empathetic speech). This practice establishes an objective moral baseline for interaction. This output actively counters the online disinhibition effect that normalizes internet hostility. Public discourse can be shifted from digital sarcasm and destructive cancel culture toward structural empathy. This transformation fosters robust religious tolerance (Rahmat & Yahya, 2022).

This externalized empathy satisfies the ethical guidance of (Al-Jailani, 2018). He posits that believers are bound by an absolute obligation to offer sincere, constructive counsel. Clearly distinguishing between social benefit and digital harm. This dual integration of *sidq* and *rahmah* fundamentally restructures user communication. It changes the interaction from reactive-aggressive loops into reflective-educative patterns (Saifulloh, 2018).

3.2.3. Analytical Synthesis and Structural Limitations

The authors aim to meet rigorous academic reporting standards. Therefore, Table 2 provides a concise, simplified mapping of the *Tahalli* model. This table links spiritual dimensions to specific digital pathologies. Furthermore, it identifies the boundary conditions where the framework might fail.

Table 2. *Tahalli* Internalization and *Tabayyun* Ethics

Dimension Level	Behavioral Impact	Output & Source	Model (Failure Conditions)	Limitations
Sidq (Honesty) (<i>Internal Filter</i>)	Active empirical verification	<i>tabayyun</i> and source	Algorithmic that isolate	<i>echo chambers</i> factual verification.
Rahmah (Compassion) (<i>External Output</i>)	<i>Qaulan layyina</i> digital sarcasm	replacing	Severe driven by	<i>online disinhibition</i> account anonymity.

3.3 Tajalli Manifestation: Integrating Ihsan Awareness into Online Communication Behavior

3.3.1 The Structural Mechanism of Digital Ihsan and Muraqabah Domains

Thematic condensation of the data indicates that *Tajalli* functions as a dynamic cybernetic output. In this output, an individual's internal spiritual purification is evident. This internal purity is concretely actualized in real-world online communication. This phase does not present a static state of mindfulness. Instead, the empirical manifestation of this phase constructs a functional model of "Digital *Ihsan*." Analytical extraction of the Al-Ghazali (2012) The framework demonstrates a crucial concept. A Muslim's *muraqabah* (divine mindfulness) operates as an actionable cognitive firewall. This system is divided into three operational domains that directly disrupt contemporary online pathologies.

First, *muraqabah* in obedience is manifested through the active preservation of digital etiquette (*adab*) and linguistic sincerity. Eliminates the internal drive for artificial validation-seeking. Second, *muraqabah* in disobedience is realized through an immediate, proactive cognitive shift away from toxic digital spaces. This shift actively drives digital repentance (*taubat*). Furthermore, it triggers the rejection of misinformation distribution networks. Third, *muraqabah* in mundane matters (*mubah*) ensures that casual web browsing and digital consumption remain governed by persistent ethical boundaries. This consumption is also guided by structural gratitude under Divine supervision.

This model demonstrates that constant divine awareness fundamentally reconfigures the user's perception of network anonymity. Rather than viewing cyberspace as an unmonitored domain, the user internalizes an invisible accountability structure. Textual synthesis extends this individual mechanism into broader social networks. Al-Jailani (2018) establishes that individuals operate under perpetual divine surveillance. Consequently, they naturally align their behaviors and communication outputs with virtuous collectives. This alignment proves that digital

muraqabah structurally bridges personal moral restraint with the organic formation of ethical online communities.

3.3.2 Analytical Derivation of the Three Pillars against Cyber-Pathologies

The empirical data show that translating the *Tajalli* phase into digital communication nodes relies on three interconnected structural pillars: Digital Muraqabah, Automatic Control, and Sustainable Ethics. The structural linkage of these variables constructs a functional, theocentric firewall against algorithmic exploitation:

Digital Muraqabah: This pillar establishes an absolute and constant cognitive awareness. It dictates that every discrete data interaction is performed within the immediate divine presence. These interactions include keystrokes, content clicks, and media uploads (Avicena & Umam, 2026). The data confirms that this deep psychological anchor changes a user's intent from passive scrolling to active, high-integrity interaction. This change counters vanity metrics and metric-driven validation (*riya'*).

Automatic Control: Derived directly from the cognitive awareness of divine presence, this pillar operates as an internal self-censorship apparatus. The data reveal that this mechanism operates independently of platform moderators. It also functions without external community guidelines or formal legal frameworks. This independence allows users to preemptively suppress the impulse to participate in harmful online behaviors. These behaviors include coordinated trolling, doxxing, or cyberbullying (Fu et al., 2026).

Sustainable Ethics: This pillar stabilizes individual restraint into long-term behavioral consistency. The textual analysis confirms that under this mechanism, communicative outputs are governed strictly by enduring moral accountability. They are also guided by transcendental principles. Instead, being swept away by high-velocity viral trends or platform engagement metrics (Saifulloh, 2015).

3.3.3 The Cyclical Feedback Loop of the Sufi Model

The proposed theoretical framework must meet standard academic expectations for reporting research outcomes. To achieve this, the systematic linkage within the framework operates as a closed-loop cybernetic system. It does not function as a static, linear timeline. The text analysis establishes a structural, cyclical feedback mechanism among the three classical Sufi stages.

The process begins with *Takhalli*. It purges the user's cognitive space of algorithmic malice, outrage, and bias. This purgation is a strict functional prerequisite for *Tahalli*. It fills the cleared cognitive space with validation protocols, such as *tabayyun* (rigorous verification).

Logically, this validation flow produces *Tajalli*. This term refers to the concrete manifestation of ethical, counter-narrative postings against information disorder. Critically, the data proves that every successful execution of *Tajalli* feeds back into the system. This feedback loop is reinforcing the user’s initial *Takhalli* layer. This continuous loop systematically lowers the user’s baseline vulnerability to digital manipulation. Consequently, it transforms them into a permanent anchor of truth within the digital ecosystem (Samsuriyanto, 2018).

3.3.4 Boundary Conditions and Model Failure Limitations

A rigorous analytical examination of the proposed model reveals distinct boundary conditions. At these boundaries, the framework experiences a structural breakdown, specifically regarding the collapse of *muraqabah*. The data identifies a major limitation termed the “Cyber-Deindividuation Threshold.”

An individual may face extreme online anonymity combined with weaponized, high-frequency algorithmic outrage. Under these conditions, the cognitive velocity of the platform can outpace human deliberative reflection. Under these high-stress conditions, the automated internal moral brakes can be bypassed by echo-chamber confirmation biases. This systemic overload collapses the digital *muraqabah* mechanism. As a result, it causes even spiritually trained communication actors to lapse back into acute digital pathologies. These pathologies include digital falsehood (*kizb*), online envy (*hasad*), and ostentatious metric manipulation (*riya*’).

Table 3. *Tajalli* Manifestation in Online Behavior

Pillar	Target Cyber-Pathology	Digital Communication Output
Digital <i>Muraqabah</i>	Metric Validation (<i>Riya</i> ’)	Verifiable, honest posting over viral clickbait.
Automatic Control	Coordinated Trolling / Bullying	Immediate self-censorship of toxic impulses.
Sustainable Ethics	Algorithmic Outrage / Hoaxes	Long-term truth anchoring over social trends.

3.4. Methodological Derivation and Analytical Examination of the TTT Theoretical Model

This section separates empirical textual findings from generic theoretical exposition. To do this, it synthesizes the cumulative insights from Sections 3.1, 3.2, and 3.3 into a unified framework. The structural integration of the coded data does not present a static moral framework. Instead, it reveals a multi-tiered, closed-loop cybernetic circuit designed to

disrupt algorithmic digital pathologies. This dynamic ecosystem is illustrated in Figure 2. It maps the structural interactions, systemic dependencies, and operational boundaries of the entire framework.

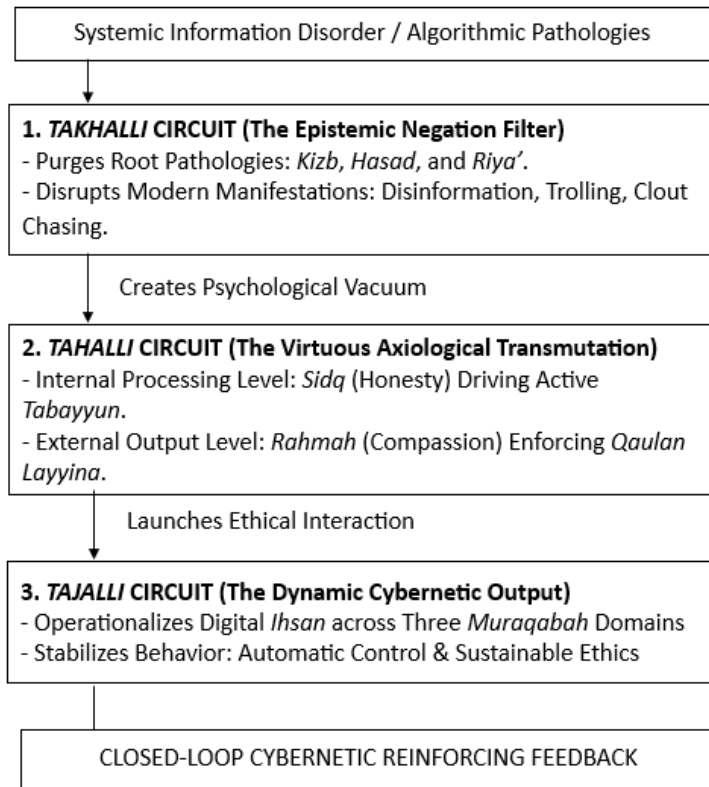


Figure 2. The *Takhalli-Tahalli-Tajalli* (TTT) Cybernetic Spiritual Circuit against Information Disorder

3.4.1. Non-Exhaustive Epistemic Categorization within the Model

To establish clear analytical boundaries for the framework displayed in Figure 2, the classification of *kizb* (lying), *hasad* (envy), and *riya'* (showing off) is presented. However, this is not proposed as an exhaustive catalog of all internet infractions. Instead, the structural condensation of the textual data establishes these three concepts as epistemic root-pathologies. Consequently, they branch out into modern, highly weaponized digital behaviors.

As visualized in the initial input layer of the model, *kizb* acts as the root architecture for manufactured disinformation, fake news, and algorithmic hoaxes. *Hasad* is coded as the psychological engine driving overt cyber-aggression. It expands far beyond generic moral failure into organized trolling, malicious doxxing, flaming, and toxic cancel culture.

Riya represents the monetization of the ego within the attention economy. This drives clout chasing, rage-baiting, vanity metrics, and manipulative personal branding.

3.4.2. Dynamic Interaction Mechanics of the Closed-Loop Feedback

The systematic linkage presented in Figure 2 demonstrates the interaction between *Takhalli*, *Tahalli*, and *Tajalli*. However, this process does not operate on a static, linear timeline. Instead, the analytical integration of the data proves that these stages form an active Closed-Loop Cybernetic Feedback System. This system operates through three sequential and reproductive phases:

The Core Prerequisite Interlock: Figure 2 illustrates that *Takhalli* (the negative filter) is a functional prerequisite for *Tahalli* (the positive infusion). The toxic residues of algorithmic outrage must be purged first. Otherwise, the implementation of *tabayyun* data auditing will collapse due to cognitive clutter.

The Output Trajectory: The combination of cognitive purification and active ethical decoration naturally projects the user into the state of *Tajalli*. In this phase, the three pillars—*Digital Muraqabah*, *Automatic Control*, and *Sustainable Ethics*—activate simultaneously. They function to govern every keystroke and content upload independently of external platform moderation.

The Reinforcing Feedback Loop: Crucially, every single instance where a user successfully practices *Tajalli* (e.g., executing automatic control to suppress a toxic trolling impulse). This action feeds directly back into the system. Methodologically, this means each ethical output structurally fortifies the initial *Takhalli* layer. Consequently, this process permanently lowers the user's baseline vulnerability to algorithmic exploitation over time.

3.4.3. Critical Boundaries: When Muraqabah Fails

This model rejects idealistic moralizing to maintain empirical validity and satisfy rigorous academic reporting standards. It achieves this by explicitly addressing the Cyber-Deindividuation Threshold. This specific threshold is where the *muraqabah* mechanism experiences severe structural breakdown.

As indicated in the operational limits of the final phase in Figure 2, *muraqabah* is a deliberative, reflective cognitive process. An online agent might face extreme internet anonymity paired with a rapid, high-frequency influx of tailor-made algorithmic outrage. In this situation, the platform's transmission velocity outpaces human reflection. In this split second, the immediate neurological dopamine loop causes a temporary breakdown of the internal accountability shield. The user experiences a

compartmentalization of morality, temporarily lapsing back into acute digital pathologies. This failure condition proves that the TTT model cannot operate in an institutional vacuum. Instead, it must be structurally supported by platform algorithmic redesigns and external media literacy policies.

4. Discussion

4.1. Theoretical Positioning: Intersecting the TTT Cybernetic Circuit with Contemporary Digital Governance

4.1.1. Deconstructive Engagement and Hybridization with Conventional Governance

Conventional comparative analyses frequently lapse into reductive binary dichotomies. These frameworks pit external regulatory paradigms against internal spiritual values in a black-and-white fashion. This study rejects such polarization. It achieves this by repositioning the *Takhalli-Tahalli-Tajalli* (TTT) theoretical model as a micro-individual, complementary-hybrid intervention within contemporary digital governance.

Empirically, formal external regulations demonstrate tangible efficacy as macro-level instruments of social control. Examples include state cyber laws and platform content moderation policies (Montez & Kim, 2025). However, this conventional governance faces an inherent regulatory lag. This is because formal law can only reach actions. Specifically, these must have already physically or digitally manifested as footprints, complaints, or screenshots (Damanik, 2026). Consequently, these external frameworks operate curatively. They react only after social damage or character assassination has occurred. As a result, they fail to contain toxic narratives before they trigger destructive horizontal polarization (Karimulloh & Nursanti, 2026).

The TTT cybernetic circuit does not seek to substitute external legal compliance. However, it functions as an internal psycho-spiritual anchor that operates symbiotically at the communication level. In highly asymmetrical digital ecosystems, the model shifts the locus of monitoring from external institutions or human moderators. Instead, it moves into the deepest center of individual consciousness (Saifulloh, 2011). Under the *Tajalli* phase, this manifests as an automated ethical filter driven by *Digital Muraqabah*. This is the omnipresent awareness that every single keystroke and click occurs under divine supervision. Therefore, it functions completely independently of external surveillance (Avicena & Umam, 2026).

4.1.2. Methodological Advancement Over Static Theological Frameworks

To advance the academic argument beyond a mere repetition of textual findings in a comparative format, the TTT model must be critically evaluated. Specifically, it needs to be measured against existing digital religious ethics frameworks. Traditional studies, such as Damanik (2026) Normatively, they assert that theological compliance linearly diminishes Siber toxicity. A critical evaluation of Damanik's (2026) model, however, exposes a methodological gap. The model specifically fails to explain the dynamic cognitive or psychological mechanisms. Abstract religious doctrines transform into active self-restraint when a user is subjected to high-frequency algorithmic outrage.

The TTT framework addresses this limitation by establishing a Closed-Loop Cybernetic Feedback System. This system operates through radical-preventive mechanics rather than static moralizing. Under this model, digital compliance ceases to be a reactive behavior. Instead, it is no longer driven by external fears of legal sanctions or reputation loss (Montez & Kim, 2025). Instead, it transforms into an existential drive to maintain soul purity against spiritual pathologies (Al-Ghazali, 2012).

By deconstructing the ego (*nafs*) directly at the center of the human cognitive system, the TTT circuit operates effectively. This process subsequently severs impulsive communication pathways (Samsuriyanto, Imani, et al., 2025). Methodologically, every instance of automatic control executed during the *Tajalli* phase feeds directly back into the system. This loop structurally reinforces the initial Takhalli layer and permanently lowers the user's vulnerability to algorithmic exploitation over time.

4.1.3. Theoretical Grounding, Operationalization, and De-theologization

To validate the causal links of this psycho-spiritual framework, the model requires strong empirical grounding. It must also eliminate risks of religious coercion or cultural bias in pluralistic digital spaces. Consequently, the TTT circuit is grounded in Albert Bandura's Self-Regulation Theory and contemporary cyber-psycholinguistics. The epistemic root-pathologies of *kizb* (lying), *hasad* (envy), and *riya'* (showing off) are stripped of their purely dogmatic definitions. Instead, they are reoperationalized as specific self-regulatory failures. These failures occur when facing digital disinhibition and attention-economy monetization. The internal theological disruption of one's relationship with the Creator (Al-Ghazali, 2012) is critically analyzed. This disruption, along with the resulting horizontal social disharmony (Muhid & Samsuriyanto, 2018) is translated into observable, measurable digital behaviors.

Table 4. Theoretical Positioning and Operationalization of the TTT Circuit

Paradigm Circuit	Control / Compliance Focus	& Operational Intervention Mechanism	Solution Nature & Boundaries
Conventional	External: Digital footprints & legal sanctions.	Content moderation, state laws, and cognitive media literacy.	Curative: Post-damage reaction to viral polarization.
TTT Circuit	Internal: Soul purity & <i>Digital Muraqabah</i> .	Closed-Loop: <i>Takhalli</i> (purge), <i>Tahalli</i> (infuse), <i>Tajalli</i> (automate).	Radical-Preventive: Deconstructs the ego (<i>nafs</i>) before execution.

As outlined in Table 4, the TTT model is cross-operationally accessible to diverse populations without theological friction. First, *Takhalli* functions as cognitive disengagement from algorithmic outrage. Second, *Tahalli* introduces constructive data auditing (*tabayyun*) paired with positive linguistic framing. Finally, *Tajalli* locks this process into a sustainable habit loop of ethical autonomy.

Nonetheless, the model recognizes clear empirical boundaries. This limit occurs when an agent encounters the *Cyber-Deindividuation Threshold*—where extreme online anonymity intersects with a massive, high-velocity influx of tailored platform outrage. Under these conditions, the deliberative capacity of *Digital Muraqabah* faces a temporary structural breakdown. Consequently, the TTT model is not presented as an idealistic utopia. Instead, it must be structurally supported by external platform algorithmic redesigns and institutional media policies. This collaborative approach aims at restoring digital communication into an objective act of human welfare and spiritual worship (Samsuriyanto, et al., 2025).

4.2. Cybernetic Causality Analysis: Closed-Loop Feedback Mechanisms and Structural Thresholds

The cause-and-effect relationship between an individual’s internal transformation through the Takhalli-Tahalli-Tajalli (TTT) circuit and the reduction of information disorder is highly complex. Therefore, this relationship cannot be formulated as a deterministic or linear law. Instead, as structurally synthesized in Section 3.4 (Figure 2), this relationship operates as a closed-loop cybernetic feedback system. This unique system subsequently alters behavioral probabilities within a complex socio-technical ecosystem (Saifulloh, 2008). This analysis does not dismiss

conventional legal and cognitive-led regulatory frameworks. Instead, it models how internal spiritual-psychological self-governance complements external structural constraints to suppress digital pathologies at their epistemic roots.

4.2.1. Mitigating Root-Pathologies and Deconstructing Destructive Motives

Conventional digital ethics and regulatory exhibit empirical efficacy primarily as post-damage, curative interventions. Examples of these external measures include state laws or content moderation that operate strictly at the boundary of external digital footprints. However, they frequently fail to address the underlying psychological drivers of information disorder.

Through the lens of the TTT model, the production and propagation of toxic information are triggered by specific epistemic root-pathologies. These pathologies exist within the human ego (*nafs*): *Kizb* (Lying): Operates as the root behavioral architecture generating manufactured disinformation. This architecture also creates algorithmic hoaxes. *Hasad* (Envy): Acts as the internal psychological engine driving malicious trolling and doxing. It also fuels flaming and toxic cancel culture (Islam et al., 2020). *Riya'* (Showing off): Represents the monetization of the ego within the digital attention economy. This phenomenon triggers impulsive clout chasing and manipulative personal branding (Huang et al., 2022).

The causal intervention of *Takhalli* introduces a radical-preventive mechanism. This mechanism works by deconstructing these egoistic impulses at the pre-communication phase. By intentionally purging the pathological roots of *hasad* and *riya'*, the individual's internal motivation to degrade others is structurally neutralized. This also prevents them from manipulating facts for digital validation (Bekar & Özbek, 2023). Consequently, the supply chain of toxic information collapses at the Hulu (upstream) level. This is because the *mens rea* (guilty mind) of the digital agent has been deactivated prior to behavioral execution.

4.2.2. The Closed-Loop Cybernetic Feedback and Behavioral Regulation

The operational trajectory of the TTT circuit relies on a non-linear, reproductive feedback loop. In this loop, each stage serves as a functional prerequisite for the next. This process establishes a sustainable internal control system:

The Core Prerequisite Interlock: The purification phase (*Takhalli*) is an absolute cognitive prerequisite for ethical infusion (*Tahalli*). Purging the toxic residues of algorithmic outrage yields cognitive decluttering. Without this emotional self-regulation, conventional data-auditing and verification

protocols (*tabayyun*) inevitably collapse. This collapse happens under intense cognitive clutter.

The Dynamic Output Trajectory: Once the cognitive space is cleared, it is infused with proactive ethical virtues. Following this, the user is projected into the state of *Tajalli*. Guided by *Digital Muraqabah*, the user activates an automatic internal control shield independent of external platform moderation (Fu et al., 2026; Samsuriyanto, et al., 2025). In terms of psycholinguistic causality, this state dictates a non-inflammatory text architecture. This architectural project projects empathy and polite speech (*qaulan layyina*) onto the digital space (Giulianelli et al., 2024; Rahmat & Yahya, 2022).

The Reinforcing Feedback Loop: Crucially, every successful execution of automatic control (e.g., suppressing a toxic trolling impulse) feeds back into the system. This repeated ethical output structurally reinforces the initial *Takhalli* layer. Over time, it permanently lowers the user's baseline vulnerability to algorithmic exploitation (Keusch et al., 2023; Saifulloh, 2018).

4.2.3. Systemic Thresholds and Intercontextual Hybrid Reality

To ensure empirical validity and avoid normative or idealistic moralizing, this causal framework recognizes a critical breakdown point. This point is known as the Cyber-Deindividuation Threshold. *Digital Muraqabah* is a deliberative, reflective cognitive process. However, an online agent may encounter extreme anonymity combined with a rapid, high-frequency influx of tailor-made algorithmic outrage. In this situation, the platform's transmission velocity outpaces human reflection. In this split second, the immediate neurological dopamine loop causes a temporary breakdown of the internal accountability shield. This breakdown leads to a compartmentalization of morality where the user temporarily lapses back into acute digital pathologies.

This failure condition demonstrates that the TTT model cannot operate in an institutional or regulatory vacuum. It rejects the false dichotomy between spiritual compliance and legal compliance. To effectively combat information disorder, a Hybrid Cybernetic-Regulatory Model is mandatory. The internal TTT circuit provides the indispensable ethical will and psychological resilience at the upstream level. Conventional frameworks such as platform algorithmic redesigns, state regulations, and external media literacy policies. It must provide the external structural boundaries at the downstream level.

Table 5. Cybernetic Causal Mechanisms, Operational Indicators, and Systemic Boundaries of the TTT Circuit

Circuit Phase	Causal Mechanism	Operational Indicators	Systemic Boundaries
<i>Takhalli</i> (Purge)	Deconstructs the communication phase. <i>kizb</i> , <i>hasad</i> , and <i>riya'</i> at the pre-communication phase.	<ul style="list-style-type: none"> • Increased post delay. • Reduced validation-seeking posts. 	High vulnerability to extreme algorithmic outrage economies.
<i>Tahalli</i> (Infuse)	Filters negative triggers through <i>tabayyun</i> (active data auditing).	<ul style="list-style-type: none"> • High rate of verification behavior. • Non-inflammatory diction. 	Cognitive overload under high-frequency information influx.
<i>Tajalli</i> (Automate)	Stabilizes <i>Muraqabah</i> via automatic self-censorship systems.	<ul style="list-style-type: none"> • Suppression of toxic impulses. • Spontaneous empathetic narratives. 	Structural breakdown at the Cyber-Deindividuation Threshold.

5. Conclusion

5.1 Synthesis of Findings and Resolution of Objectives

This study successfully resolves its core research objectives. It does so by introducing the *Takhalli-Tahalli-Tajalli* (TTT) Cybernetic Spiritual Circuit as an inner-driven ethical mechanism against information disorder. Rather than repeating statistical summaries, the synthesis of findings reveals a crucial fact. Modern digital pathologies are driven by three epistemic root-pathologies within the human ego. These roots include *kizb* (disinformation), *hasad* (cyber-aggression and toxic trolling), and *riya'* (the monetization of the ego). The dynamic interaction of the data demonstrates that these stages form an active closed-loop feedback system. By neutralizing the *mens rea* (guilty mind) of the digital agent at the upstream pre-communication phase, this framework shifts the resolution of information disorder. It moves the focus from reactive external content moderation to proactive internal self-regulation.

5.2 Theoretical Implications and Scholarly Humility

The theoretical contribution of this work lies in intersecting classical Islamic mysticism with contemporary communication theory and digital cybernetics. This unique intersection illustrates a powerful concept. It shows how spiritual mindfulness acts as an autonomous internal control

shield. However, the authors maintain strict scholarly humility regarding these insights. As a qualitative, conceptual framework derived from text synthesis, this model remains empirically untested. It is not presented as an absolute law to instantly rewrite established digital literacy theories. However, this model serves rather as an open, highly structured foundational hypothesis. It bridges the gap between theology and cybernetics, inviting subsequent validation.

5.3 Limitations and Impact on Claim Validity

To prevent speculative overreach, the boundary conditions and failure points of the model must be explicitly acknowledged. The primary limitation of this research is its conceptual nature and the absence of primary empirical data. It restricts the immediate generalization of the model's scalable efficacy. Furthermore, the framework identifies a critical breakdown point at the *Cyber-Deindividuation Threshold*. A user may encounter extreme online anonymity combined with a rapid influx of algorithmically tailored outrage. In this situation, the platform's velocity outpaces human reflection. In this split second, the internal *muraqabah* mechanism experiences a structural breakdown due to temporary moral compartmentalization. Therefore, the TTT circuit cannot operate effectively in an institutional vacuum.

5.4 Actionable Pathways for Curriculum Integration

The practical utility of the TTT framework can be operationalized through structured instructional design. This process translates the closed-loop circuit into an actionable pedagogy within educational environments:

The *Takhalli* Module (Upstream Deconstruction): A 3-week unit in Media Literacy courses focused on identifying epistemic root-pathologies (*kizb, hasad, riya*). The unit also addressed managing emotional triggers of algorithmic outrage. Finally, students learned about practicing deliberate post delay to curb impulsive sharing.

The *Tahalli* Module (Active Data Auditing): A structured module is now integrated into Digital Ethics curricula. This module teaches actionable protocols for *tabayyun* verification, critical evaluation of high-frequency information influx. Additionally, it focuses on the cultivation of empathetic, non-inflammatory digital speech.

The *Tajalli* Module (Automated Internal Control): A semester-long, project-based learning initiative invites students to maintain digital behavioral logs. These logs track the autonomous suppression of toxic impulses. Furthermore, they document the creation of positive, community-oriented digital narratives.

5.5 Broader Significance: Sufistic Ethics in the Digital Age

Ultimately, the TTT model provides a profound philosophical anchor. This anchor helps users navigate in a socio-technical ecosystem driven by algorithmic manipulation and hyper-polarized digital spaces. This study demonstrates that a healthier digital public square cannot be achieved through a false dichotomy. This dichotomy refers to spiritual and legal compliance. Instead, the issue demands a *Hybrid Cybernetic-Regulatory Model*. Macro-level regulations and platform algorithmic redesigns provide essential external structural boundaries at the downstream level. In contrast, Sufistic ethics provides the indispensable ethical will and psychological resilience at the upstream level. This combination successfully transforms the user into a conscious moral agent.

Reference

- Abu al-Naja, K. A. N. A. (2025). Al-Tajalli al-Ilahi 'inda al-Imam al-Ghazali: Dirasah Tahliliyyah. *Majallah Kulliyah Ushul al-Din wa al-Da'wah bi al-Manufiyyah*, 44(44), 1–159. <https://doi.org/10.21608/bfdm.2025.476375>
- Al-Ghazali, A. H. M. b. M. (2012). *Ihya' Ulumiddin*. Republika Penerbit.
- Alharahsheh, H. H., & Pius, A. (2020). A Review of key paradigms: Positivism VS interpretivism. *Global Academic Journal Humanities and Social Sciences*, 2, 39–43. <https://doi.org/10.36348/gajhss.2020.v02i03.001>
- Al-Jailani, A. Q. (2018). *Al-fathu ar-rabbani wa al-faidh ar-rahmani*. Noktah.
- Avicena, A. Z., & Umam, M. H. (2026). The Genealogy of Digital Asceticism in the Vortex of the Attention Economy: The Dialectic of Technologies of the Self and Muraqabah. *Journal of Islamic Civilization*, 7(2), 149–162.
- Bekar, F., & Özbek, M. F. (2023). Managing Differences and Importance Between Religion, Spirituality, Spirituality at Work, Cyber Spirituality, and Dataism. In F. Özsungur & F. Bekar (Eds.), *Spirituality Management in the Workplace* (pp. 1–25). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83753-450-020231001>
- Damanik, V. A. (2026). The Disruption of Digital Evidence in Criminalizing the Spread of Deepfakes: A Positive Criminal Law Analysis and the Perspective of Al-Fiqh Al-Jinayah. *Al-Afkar, Journal For Islamic Studies*, 9(2), 131–144. <https://doi.org/10.31943/afkarjournal.v9i2.3400>

- Fu, J., Liu, H., Sindakis, S., & Biginas, K. (2026). Navigating the dark side of digital transformation: Addressing discrimination and toxicity in tech-driven organizations. *Journal of Organizational Change Management*, 39(2), 298–327. <https://doi.org/10.1108/JOCM-09-2024-0553>
- Gilad, A., & Tishler, A. (2024). Measuring and Mitigating the Risk of Advanced Cyberattackers. *Decision Analysis*, 21(4), 215–234. <https://doi.org/10.1287/deca.2023.0072>
- Giulianelli, M., Malagutti, L., Gastaldi, J. L., DuSell, B., Vieira, T., & Cotterell, R. (2024). On the Proper Treatment of Tokenization in Psycholinguistics. *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing*, 18556–18572. <https://doi.org/10.18653/v1/2024.emnlp-main.1032>
- Hawwa, S. (1999). *Tarbiyatuna al-ruhiyyah (6th ed.)*. Dar Al Salam.
- Huang, S., Wang, G., Lei, D., & Yan, Y. (2022). Toward digital validation for rapid product development based on digital twin: A framework. *The International Journal of Advanced Manufacturing Technology*, 119(3–4), 2509–2523. <https://doi.org/10.1007/s00170-021-08475-4>
- Islam, M. M., Uddin, M. A., Islam, L., Akter, A., Sharmin, S., & Acharjee, U. K. (2020). Cyberbullying Detection on Social Networks Using Machine Learning Approaches. *2020 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE)*, 1–6. <https://doi.org/10.1109/CSDE50874.2020.9411601>
- Jahanabadi, R., Bideshki, M., & Bahrehmand, M. (2023). Pathology of virtual space and filtering based on the jurisprudential rule of expediency. *Applied Research in Jurisprudence and Law*, 3(1), 163–173.
- Joyce, C. B. (2025). Do States Constrain Non-State Hackers? International Telecommunication Union Elections and Non-State Cyber Aggression. *Journal of Conflict Resolution*, 69(10), 1687–1712. <https://doi.org/10.1177/00220027251323557>
- Karimulloh, & Nursanti, A. (2026). Preventive and Curative Studies in Reducing Cyberbullying: A Comparative Analysis from Psychological and Islamic Perspectives. *Australian Journal of Islamic Studies*, 11(1), e101. <https://doi.org/10.55831/ajis.v1i1.1121>

- Keusch, F., Bach, R., & Cernat, A. (2023). Reactivity in measuring sensitive online behavior. *Internet Research*, 33(3), 1031–1052. <https://doi.org/10.1108/INTR-01-2021-0053>
- Lehto, M., & Pöyhönen, J. (2026). Comprehensive Cyber Security and Resilience Architecture Framework. In M. Lehto & P. Neittaanmäki (Eds.), *Cyber Security* (Vol. 183, pp. 287–337). Springer Nature Switzerland. https://doi.org/10.1007/978-3-032-08890-1_13
- Miles, M. B., Huberman, M. A., & Saldaña, J. (2020). *Qualitative Data Analysis* (4th ed.). SAGE Publications.
- Montez, D., & Kim, D. H. (2025). How Do Silent Trolls Become Overt Trolls? Fear of Punishment and Online Disinhibition Moderate the Trolling Path. *Social Media + Society*, 11(1), 20563051251320437. <https://doi.org/10.1177/20563051251320437>
- Muhid, A., & Samsuriyanto, S. (2018). Dakwah Moderat Habib Muhammad Luthfi bin Yahya di Dunia Virtual: Analisis Wacana Teks Media Teun A. van Dijk. *Proceedings of Annual Conference for Muslim Scholars*, (Series 2), 1079–1092. <https://proceedings.kopertais4.or.id/index.php/ancoms/article/download/208/207>
- Muris, P., Otgaar, H., Donkers, F., Ollendick, T., & Deckers, A. (2025). Caught in the Web of the Net? Part II: A Motivation-Based Developmental Psychopathology Model for the Aberrant Internet Use in (Young) People with Autism Spectrum Disorder. *Clinical Child and Family Psychology Review*, 28(3), 753–767. <https://doi.org/10.1007/s10567-025-00539-1>
- Murtiningsih, & Adeoye, M. A. (2025). Hoaxes in Islamic Perspective: Qur’anic Solutions for Building an Anti-Hoax Society. *Al-Karim: International Journal of Quranic and Islamic Studies*, 3(1), 35–58. <https://doi.org/10.33367/al-karim.v3i1.6818>
- Pohlmeyer-Esch, G., Halsey, C., Boisclair, J., Ram, S., Kirschner-Kitz, S., Knight, B., Moulin, P., & Frisk, A.-L. (2025). Digital Pathology and Artificial Intelligence Applied to Nonclinical Toxicology Pathology—The Current State, Challenges, and Future Directions. *Toxicologic Pathology*, 53(6), 516–535. <https://doi.org/10.1177/01926233251340622>
- Pöyhönen, J., & Lehto, M. (2024). Architecture Framework for Cyber Security Management. *European Conference on Cyber Warfare and*

Security, 23(1), 388–397.
<https://doi.org/10.34190/eccws.23.1.2340>

- Prihantoro, H. A., & Mustafid, F. (2023). Hoax from the Perspective of Islamic Legal Thought: Reactivating Qat‘i-Zanni in the Post-Truth Era. *Jurnal Akidah & Pemikiran Islam*, 25(2), 353–386. <https://doi.org/10.22452/afkar.vol25no2.11>
- Rahmat, M., & Yahya, M. W. B. H. M. (2022). The Impact of Inclusive Islamic Education Teaching Materials Model on Religious Tolerance of Indonesian Students. *International Journal of Instruction*, 15(1), 347–364.
- Rofiq, M., & Samsuriyanto, S. (2025). Da’wah Television From The Perspective Of Islamic Media: A Theoretical Framework Of Ownership, Content, Management, Product, And Goal. *INJECT (Interdisciplinary Journal of Communication)*, 10(2), 701–722. <https://doi.org/10.18326/inject.v10i2.5927>
- Rofiq, M., & Samsuriyanto, S. (2026). Multidisciplinary Da’wah Communication Strategy: Integrating Digital Media, Psychological Approaches, and Islamic Values in Mitigating Online Gambling Hazards. *Neo Journal of Economy and Social Humanities*, 5(1), 27–36. <https://doi.org/10.56403/nejesh.v5i1.393>
- Sætra, H. S., & Selinger, E. (2024). Technological Remedies for Social Problems: Defining and Demarcating Techno-Fixes and Techno-Solutionism. *Science and Engineering Ethics*, 30(6), 60. <https://doi.org/10.1007/s11948-024-00524-x>
- Saifulloh, M. (2008). Tasawuf sebagai Solusi Alternatif dalam Problematika Modernitas. *ISLAMICA: Jurnal Studi Keislaman*, 2(2), 207. <https://doi.org/10.15642/islamica.2008.2.2.207-216>
- Saifulloh, M. (2011). ABORSI DAN RESIKONYA BAGI PEREMPUAN (Dalam Pandangan Hukum Islam). *Jurnal Sosial Humaniora*, 4(1). <https://doi.org/10.12962/j24433527.v4i1.636>
- Saifulloh, M. (2015). Etos Kerja Pengikut Tarekat Qâdirîyah wa Naqshabandîyah. *Teosofi: Jurnal Tasawuf Dan Pemikiran Islam*, 2(2), 264. <https://doi.org/10.15642/teosofi.2012.2.2.264-291>
- Saifulloh, M. (2018). MEMBANGUN MORALITAS ANAK BANGSA MELALUI PENDIDIKAN TASAWUF. *IPTEK Journal of Proceedings Series*, 0(5), 98. <https://doi.org/10.12962/j23546026.y2018i5.4428>

- Saifulloh, M., & Samsuriyanto, S. (2026). From Isnad to Algorithm: A Hybridization Model of Nahdlatul Ulama and Muhammadiyah's Communication Strategies for Institutionalizing AI Ethics in Gen-Z Da'wah. *Suhuf*, 38(1), 197–210. <https://doi.org/10.23917/suhuf.v38i1.16282>
- Samsuriyanto, S. (2018). Lingkungan Industri Media Islam. *Wasilatuna: Jurnal Komunikasi Dan Penyiaran Islam*, 1(1), 103–118. <https://doi.org/10.38073/wasilatuna.v1i1.99>
- Samsuriyanto, S., Imani, A. F., & Jailani, G. (2025). Model Komunikasi KH. Fatchurrahman Kafrawi (Teladan Usia Muda Tokoh Indonesia). *Jurnal Sains, Sosial, Dan Studi Agama*, 1(6), 684–690.
- Samsuriyanto, S., Saifulloh, M., & Muhibbin, Z. (2025). The communication style of Prof. Dr. M. Quraish Shihab, M.A., and K.H. Ahmad Bahauddin Nursalim in interpreting the Quran (Study on YouTube channel of Pusat Studi Al-Quran). *Priviet Social Sciences Journal*, 5(12), 55–65. <https://doi.org/10.55942/psj.v5i12.1108>
- Smout, S., Slade, T., Hunter, E., Thornton, L., Gardner, L. A., Newton, N. C., Champion, K. E., & Chapman, C. (2026). Scrolling, Chatting, and Posting: Longitudinal Changes in Distinct Social Media Behaviors and Their Relationship With Psychological Distress and Mental Wellbeing in Adolescents. *Journal of Adolescence*, 98(1), 237–249. <https://doi.org/10.1002/jad.70055>
- Wahyuddin, W., Saifulloh, Moh., & Samsuriyanto, S. (2023). Makna Mumarah Menurut Aswadi Syuhadak dalam Buku Mujadalah dalam Dakwah: Debat, Diskusi, Musyawarah Perspektif Al-Qur'an. *J-CEKI: Jurnal Cendekia Ilmiah*, 2(2), 178–182. <https://doi.org/10.56799/jceki.v2i2.1358>
- Wardle, C., & Derakhshan, H. (2017). *Information disorder: Toward an interdisciplinary framework for research and policymaking: Vol. 27, pp. 1–107*. Strasbourg: Council of Europe.
- Zaid, B., Fedtke, J., Shin, D. D., El Kadoussi, A., & Ibahrine, M. (2022). Digital Islam and Muslim Millennials: How Social Media Influencers Reimagine Religious Authority and Islamic Practices. *Religions*, 13(4), 335. <https://doi.org/10.3390/rel13040335>

