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Micro-media networks as a decentralized medium; A documentary and data-driven analysis of architecture, efficacy, ethical governance, and soft-power capacity at regional and global scales

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Abstract

Background: Declining engagement with linear news and persistent institutional distrust have renewed interest in human-mediated distribution. For public or state media, however, interpersonal proximity can contribute to trust repair only when editorial reform is demonstrable and institutional relationships remain transparent.

Aims: This article develops Micro-Media Networks as a human-centered, decentralized trust-repair infrastructure for a public or state media organization that has already undertaken demonstrable editorial reform. The model is not intended to disguise institutional messages or bypass an inherited trust deficit. Rather, it seeks to make truthful, source-transparent, corrigible content socially accessible and contestable through professionally autonomous human intermediaries. The article grounds the model in network society, social capital and weak ties, persuasion psychology, choice architecture, and AI-governance scholarship; reviews secondary evidence relevant to networked-human distribution; and proposes an auditable governance framework separating the model from astroturfing and hypernudge.

Methodology: The study follows a documentary-library method: systematic literature retrieval from Scopus and Web of Science, appraisal using Scott's four criteria, and qualitative content analysis. Quantitative material is drawn from secondary analysis of sources with heterogeneous evidentiary status—peer-reviewed research, official intergovernmental statistics, multinational survey reports, Google Trends, industry compilations, and Iranian online media surveys. These sources are used as contextual and convergent evidence rather than as a causal test of the proposed architecture.

Results: Convergent secondary evidence indicates a shift in attention and news access from linear institutional channels toward platform-based and human-mediated distribution, especially among younger cohorts; it does not test the proposed model itself. In response, the article proposes a three-tier architecture—an organizational core, a ring of professionally autonomous civic intermediaries, and a volunteer civic network—and formulates eight hypothesized structural advantages for future testing. A bounded AI co-pilot assists nodes without profiling individual audience vulnerabilities or replacing human judgment. The five-principle governance framework is supplemented by polycentric oversight: an Independent Public Trust Council, distributed public evaluation, and periodic academic-technical audit. Three conditional pathways illustrate how a transparently governed and empirically validated network might contribute to transnational soft power.

Conclusion: Micro-Media Networks offer a conditional framework for making institutional reform socially observable through autonomous human mediation. Their trust-repair and soft-power potential depends on transparent sponsorship, cognitive autonomy, and independent oversight. The model requires empirical validation before claims of efficacy or large-scale implementation can be justified.

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1. Introduction and problem statement

Fundamental question: Once a public or state media organization has undertaken demonstrable editorial reform—truthfulness, source transparency, correction of error, professional accountability, and meaningful pluralism—how can it make that reform observable and rebuild trust and attention at scale without relying exclusively on foreign centralized platforms?

Documented global data point to three concurrent trends, each troubling on its own, which together sketch a structural picture of a transition under way.

The first trend is the weakening of linear distribution. The Reuters Institute's Digital News Report 2024, covering more than 95,000 online news consumers across 47 markets, records an overall news-trust level of 40%, unchanged from the preceding year, alongside selective news avoidance of 39%, compared with 29% in 2017 (Newman et al., 2024). Television and print continue to face declining reach in many markets, while online video and platform-based news access are increasingly prominent, particularly among younger audiences. These findings indicate a redistribution of attention across channels; they do not establish a uniform global decline in trust or the superiority of human-mediated distribution.

The second trend concerns the uneven distribution of institutional trust. The 2024 Edelman Trust Barometer, an online survey of more than 32,000 respondents across 28 countries, places media at 50% trust, below business, NGOs, and government (Edelman Trust Institute, 2024). The 2023 report highlights a substantial income-related trust divide, with higher-income respondents generally more trusting than lower-income respondents (Edelman Trust Institute, 2023). The 2024 finding that peers and scientists are equally trusted for information about innovation further indicates the relevance of interpersonal sources, but it concerns a specific information domain and cannot establish a general migration of news trust. Taken together, these findings suggest differentiated conditions for institutional trust repair rather than a single generational trajectory.

The third trend is connectivity saturation. According to official statistics of the International Telecommunication Union, approximately 5.5 billion people worldwide are online (ITU, 2024), and the Digital 2024 global overview records more than five billion active social-media user identities (Kemp, 2024). This figure, by itself, constitutes an infrastructural reality that supplies the necessary substrate for any scalable human-distribution network.

Iran provides a context in which these tensions are particularly salient. GAMAAN's 2021 online media survey, which received more than 27,000 responses, approximately 90% from residents of Iran, reported that about 14% trusted IRIB a lot or to some extent, while 74% did not trust it at all (Maleki, 2021). Its 2023 report, based on a weighted

sample of 38,445 respondents within Iran, recorded approximately 21% expressing some or substantial trust in IRIB and 59% expressing no trust at all; frequent use of Instagram and Telegram was approximately 65% and 43%, respectively (Maleki, 2023). These findings indicate substantial distrust alongside extensive platform use, but they do not establish a continuous decline, an age-specific ranking of news sources, or an automatic transfer of trust to intermediaries. The reports concern literate residents above 19 and use online recruitment and weighting; their coverage and selection limitations therefore constrain population-level and longitudinal interpretation.

Beyond the data, there lies a structural reality behind this crisis that may be termed "**semantic porosity**". Qualitative surveys show that even when the content of institutional media is more accurate and precise than that of non-institutional sources, today's audience experiences it as "distant"; as though the content were produced for an "ideal citizen" rather than for the "me" who consumes it while standing in a bread queue, commuting to work, or sitting in a family gathering (Schrøder, 2017; Costera Meijer, 2020). It is precisely within this structural-perceptual gap that transnational networks, citizen influencers, and algorithmic platforms gain purchase; not through more accurate content, but through a more intimate tone.

This tension surrounding trust also takes distinct forms within the theoretical literature. In the Putnamian tradition, social trust emerges through repeated interaction, reciprocal norms, and horizontal networks (Putnam, 2000). In the Giddensian tradition, trust in late modernity involves reflexivity and relations sustained across time and space, with expert systems mediating confidence beyond immediate personal acquaintance (Giddens, 1990). Research on online marketplaces adds an institutional-design perspective: feedback mechanisms and third-party safeguards can support trust between participants who lack prior personal ties (Pavlou & Gefen, 2004). This marketplace evidence provides a conceptual analogy for mediated trust, not direct evidence of news credibility or trust repair by public media. These perspectives illuminate complementary aspects of the problem and inform the five-layer synthesis in Section 2.

The outcome of this review is a more limited proposition: the crisis of trust in institutional media is not reducible either to content quality or to distributional distance. Truthfulness, accuracy, source transparency, correction of error, and professional accountability are necessary conditions for trust repair, but they may be insufficient when the institutional speaker remains socially distant or when reform is not observable to skeptical audiences. A proximate, professional-local, and horizontal intermediary layer can contribute only if its members retain meaningful editorial autonomy—the right to question, contextualize, correct, or reject base content—and if their institutional relationship is disclosed. The model therefore treats networked mediation as a

mechanism for making reform socially verifiable, not as a substitute for reform.

Conventional responses to this crisis— intensifying content production or pursuing an aggressive presence on global platforms— suffer from two structural weaknesses. The first is dependence on the recommendation algorithms of platforms over which the media organization has no governance, where a single change in a weighting coefficient can cut off audience access overnight (Castells, 2013). The second is the neglect of a classic and still-valid finding: it is not direct exposure to media, but rather "opinion leaders" and interpersonal relationships, through which attitudes are changed (Katz & Lazarsfeld, 1955).

The present article formulates "Micro-Media Networks" as a conditional architectural response to these weaknesses. Its normative and practical claims apply only where the parent institution's reform is demonstrable through transparent sourcing, public correction, pluralistic editorial practice, and external audit. The model decentralizes distribution and human editorial mediation; it does not erase the organizational origin of base content. The article answers four research questions through a documentary method and secondary quantitative data:

RQ1. What are the components, layers, and structural relationships of Micro-Media Networks as a decentralized medium?

RQ2. What documented secondary quantitative evidence is relevant to the plausibility and potential efficacy of networked-human distribution, and what are its limits?

RQ3. How can the structural and ethical boundary between this network and astroturfing— as well as the theoretical risk of hypernudge— be operationalized and made auditable?

RQ4. Under what conditions does the network become an infrastructure for regional and global soft power?

2. Theoretical foundations

None of the existing theoretical traditions, on its own, can fully account for the architecture of the Micro-Media Network. Castells's network society clarifies the macro-topology of actors and power but is silent on the psychological level of influence. Putnam's social capital and Granovetter's weak ties explain the logic of trust formation within social networks but say nothing about the psychological mechanisms of persuasion. Cialdini's persuasion psychology identifies these mechanisms well but is neutral with respect to structure. And Thaler and Sunstein's choice architecture adds a layer of institutional-behavioral design to this set. With the necessary theoretical caution, this section offers a multilayered synthesis of these traditions and, in closing, introduces the concept of "hypernudge" to draw a boundary on which the governance framework of Section 5.4 will be built.

2.1. Castells's network society: Structure and the power of the network

In A Network Theory of Power, Manuel Castells distinguishes networking power, exercised by network insiders over excluded actors; network power, arising from participation rules and standards; networked power, exercised by actors over others within a network; and network-making power, involving network programming and strategic connections between networks (Castells, 2011).

For the proposed Micro-Media Network, this distinction shifts attention from organizational centrality to the distribution of access, rules, and influence. The article therefore treats intermediary autonomy, contestable admission rules, and independent oversight as safeguards against concentrated network-making power. These are design implications developed here, rather than properties that network formation itself guarantees.

Within this same framework, Castells introduces the concept of the **"switcher"**: an actor positioned at the intersection of two or more networks who can direct the flow of messages and power between them (Castells, 2009). In the context of a middle-power country, clergy can act as switchers between religious and civic networks, teachers as switchers between educational and family networks, and local physicians as switchers between professional and neighborhood networks. The second layer of the proposed architecture (Section 5.1) can be read precisely from this angle: a network of switchers, each positioned at the intersection of two social networks, capable of conveying a message more effectively than any "central speaker".

Nevertheless, Castells also offers an important self-critique that clarifies the limits of this framework: network power, in itself, does not guarantee legitimacy. A network can be extensive, efficient, and well-organized, yet if citizens experience it as an instrument of control, its authority collapses (Castells, 2012). This warning is a thread that runs from this section through to the governance framework of Section 5.4: network ethics is not a ceremonial add-on but the long-term guarantor of its efficacy.

2.2. Social capital and the power of weak ties

If Castells explains how networks generate power, Robert Putnam, in a parallel tradition, explains how social networks generate trust. In two classic works, Putnam formulates "social capital" as a collective resource that emerges from citizens' mutual ties, reciprocal norms, and generalized trust (Putnam et al., 1993; Putnam, 2000). He distinguishes two types of social capital: **bonding capital**, which forms among members of the same group (neighbors, families, co-religionists) and functions to preserve identity and social support; and **bridging capital**, which builds bridges between different groups and facilitates the flow of information and opportunities. In the proposed architecture, the third

layer (the civic network) relies mainly on bonding capital, while the second layer (the ring of professionals) plays the bridging role.

Within this same tradition, Mark Granovetter's classic finding, dating back to 1973, is of special importance. In his seminal article "The Strength of Weak Ties", Granovetter demonstrated that new information and opportunities are transmitted more often through "weak ties" (distant acquaintances) than through "strong ties" (close friends), because strong ties largely reproduce information already shared among individuals, whereas weak ties serve as gateways to information outside one's closed group (Granovetter, 1973). In a revisit a decade later, he showed that this finding holds true only for a particular type of weak tie; those that function as bridges between two networks (Granovetter, 1983).

The implication of this finding for the design of the Micro-Media Network is clear. If the civic network relies solely on the close friends of its nodes, it becomes trapped within a closed loop of confirmation; the very "filter bubble" well documented in the platform literature (Pariser, 2011). But if each node also engages distant acquaintances— former colleagues, old neighbors, university classmates— alongside close friends in distributing messages, then "the strength of weak ties" is activated and the message extends beyond the prior confirmation loop. This finding, in Section 5.1, becomes a topological design rule.

The Putnam-Granovetter tradition is situated within the larger body of social capital theory. In a later contribution, James Coleman described social capital as "a resource embedded in social relations" (Coleman, 1988), and Pierre Bourdieu placed it alongside economic, cultural, and symbolic forms of capital (Bourdieu, 1986). Nan Lin, in a later synthesis, showed that social capital is a resource embedded in the network that can be mobilized through ties (Lin, 2001). Even so, this tradition has not gone uncriticized: Alejandro Portes showed that bonding social capital can lead to insularity, exclusion of outsiders, and pressure toward conformity (Portes, 1998), and Delhey and Newton, in a major comparative analysis, showed that the relationship between social networks and generalized trust is not uniform across societies; in some cases, dense bonding networks weaken rather than strengthen generalized trust (Delhey & Newton, 2005). Within the Iranian literature, too, it has been shown that social capital takes a distinctive form rooted in structures such as family and ethnic-regional networks (Khaniki, 2019). These critiques have a place in the architectural design: the emphasis on the geographic, ethnic, and professional diversity of nodes (Section 5.1) responds to the trap of "bonding-capital insularity".

2.3. Persuasion psychology and choice architecture

The third theoretical tradition arises at the intersection of persuasion psychology and behavioral economics, and is applied in network design

at the level of "node decision architecture" and "audience experience architecture".

In four decades of field research, Robert Cialdini has formulated seven principles of persuasion: reciprocity, commitment and consistency, social proof, authority, liking, scarcity, and unity (Cialdini, 2021). Importantly, in this article these seven principles are used not as "rules of manipulation" but as "lessons in the psychology of trust"— a distinction formulated in Section 5.4. For example, the principle of social proof explains why a message arriving from a neighbor or a fellow professional carries far greater persuasive power than the identical message, with identical content, delivered by an official spokesperson; Pornpitakpan's classic meta-analysis, reviewing five decades of evidence, shows that source-receiver similarity plays a decisive role in perceived credibility (Pornpitakpan, 2004). The principle of authority likewise explains why the second layer— the local physician, the respected cleric, the well-known teacher— constitutes a credible source of persuasion; yet Cialdini, in his revised edition, emphasizes that beneficial authority is "locally legitimate" authority, not "bureaucratic-abstract" authority (Cialdini, 2021).

Continuing within the persuasion literature, Petty and Cacioppo's elaboration likelihood model shows that persuasion proceeds along two parallel routes: a "central" route (careful processing of content) and a "peripheral" route (reliance on cues such as source credibility or perceived proximity) (Petty & Cacioppo, 1986). In its design, the Micro-Media Network seeks to be active along both routes: accurate, argument-driven content for the central route, and a familiar tone delivered by recognizable faces for the peripheral route; with the key difference that, in this model, the peripheral route is accompanied by genuine local authenticity rather than algorithmic artificiality.

The parallel tradition of behavioral economics begins with Daniel Kahneman. In his classic synthesis, Kahneman presents a dual-system cognitive framework: System 1 (fast, automatic, emotional), responsible for most everyday decisions, and System 2 (slow, analytical), which is activated only under special circumstances (Kahneman, 2011). The classic findings of Tversky and Kahneman show that System 1 is subject to systematic biases in everyday choices; anchoring, availability, and framing (Tversky & Kahneman, 1974; 1981). For network design, this framework applies at two levels. At the audience level, everyday media consumption occurs largely within System 1, and a message arriving from a "colleague" is readily recognized within this system, whereas the same message from "official media" is not necessarily so. At the node level, a node's own production-distribution decisions are likewise governed mainly by System 1; a consideration that steers the design of the AI co-pilot system (Section 5.1.1) toward "default guidance" rather than "hard rules."

On this basis, Richard Thaler and Cass Sunstein proposed the

framework of "**choice architecture**": the deliberate design of the context within which people make decisions, such that the better choice is made easier without being mandatory; an approach also known as "libertarian paternalism" (Thaler & Sunstein, 2021; Sunstein, 2014). In Sunstein's tradition, a "nudge" is ethically defensible if it is transparent, does not conflict with the audience's informed decision, aligns with the audience's interests, and is exitable. The emerging literature on "boosting" takes this approach a step further: rather than manipulating choice architecture, it strengthens individuals' own cognitive capacities (Hertwig & Grüne-Yanoff, 2017). In its design, the Micro-Media Network gives priority to boosting— that is, to enhancing citizens' media literacy— and employs nudging only as a complementary tool, with full transparency.

2.4. From nudge to hypernudge: A boundary this model does not cross

In the 2010s, the nudge tradition encountered a major theoretical turn with the emergence of big data and advanced algorithms. Karen Yeung showed that combining classic choice architecture with comprehensive behavioral data and machine learning gives rise to a new phenomenon she calls "**hypernudge**": the continuous personalization of choice architecture for each specific individual, based on that individual's own behavioral data (Yeung, 2017).

On the surface, hypernudge appears to be an upgraded version of the classic nudge, but in practice it is a qualitatively different phenomenon. The classic nudge is a shared architecture that operates identically for everyone and is revisited at defined intervals; hypernudge constructs a different architecture for each individual and updates in real time with every interaction. The classic nudge rests on general psychological hypotheses; hypernudge relies on that specific individual's own behavioral data— click history, temporal patterns, emotional sensitivities— a phenomenon termed "vulnerability extraction" in the AI ethics literature (Calo, 2014; Hartzog, 2018). Yeung shows that under such conditions the condition of "transparency" becomes practically unattainable (because the architecture is changing in real time), and the condition of "exitability" becomes meaningful only at an abstract level; leaving the platform altogether (Yeung, 2017; Zuboff, 2019).

Drawing on the Kantian tradition, Susser, Roessler, and Nissenbaum specify the boundary between legitimate influence and manipulation through four conditions: legitimate influence has a clear and debatable purpose, does not exploit the audience's cognitive vulnerabilities, is transparent with the audience, and does not conflict with their interests; manipulation is the violation of at least one of these four conditions (Susser et al., 2019). This formulation is the point of departure for the governance framework of Section 5.4.

The implication of this analysis for the Micro-Media Network is

explicit: this model must not fall into the trap of "endless algorithmic optimization". The nodes' AI co-pilot system (Section 5.1.1) must not move toward mapping the cognitive profile of each audience member, even where the technology to do so is available. This is a specific design rule that, later in the article, under the heading "the hypernudge limit", becomes one of the pillars of the five-principle governance framework.

2.5. Theoretical synthesis: A multilayered trust model

The theoretical traditions discussed above are not competing theories but five complementary layers that illuminate the phenomenon of trust in media networks. Each tradition operates at a different level of analysis, and the apparent tensions between them— for instance, the tension between Putnam's emphasis on collective capital and Cialdini's emphasis on individual psychology— exist across two different levels of analysis, related to but independent of one another. The metatheoretical literature in the social sciences calls this kind of combination "levels pluralism": the acceptance that each theory is complete and adequate at its own level, without any need to reconcile all levels into a single unified theory.

Table 1 shows the relationship of each tradition to the constructs of the model.

Table 1. Theoretical synthesis: Supporting traditions, level of analysis, and application in the model

Level	Theoretical tradition	Level of analysis	Fundamental question	Application in the micro-media network
Structural	Network society (Castells)	Macro-topology of power	Where is power produced?	Design of the switcher network; focus on "network-making power"
Social	Social capital and weak ties (Putnam, Granovetter, Coleman)	Interpersonal relations	How does trust arise in the network?	Three-tier architecture; distinction between bonding and bridging capital
Psychological	Persuasion psychology (Cialdini, Petty-Cacioppo)	Individual-interpersonal	Why does a message persuade?	Selection of nodes, tone, and central/peripheral route of content
Behavioral-choice	Kahneman, Thaler-Sunstein	Everyday decision-making	How should the decision context be designed?	Default guidance for the AI co-pilot; priority of boosting over nudging
Ethical-legal	Yeung, Susser-Roessler-Nissenbaum	System as a whole	Where is the ethical boundary of intervention?	Five-principle governance framework; the hypernudge limit

This five-layer model constitutes the reference structure for the Findings sections. Section 5.1 operates primarily within the structural and social layers; Section 5.1.1 within the behavioral-choice layer; and Section 5.4 within the ethical-legal layer, where the five-principle governance framework establishes, in an auditable manner, both the upper boundary (astroturfing) and the lower boundary (hypernudge).

3. Literature review and research gap

3.1. Literature review

The existing literature covers three adjacent, yet separate, strands of research. The first strand is the study of influencers and micro-celebrities, which has shown that credibility arising from perceived intimacy becomes an exchangeable form of media capital (Abidin, 2018), and that the pressure of "platformization" pushes even independent producers toward an influencer logic (Bishop, 2025); this strand, however, has not addressed the transparent institutional organization of this capacity.

The second strand is the study of astroturfing and coordinated information operations, which has produced a typology of covert manipulation (Kovic et al., 2018), an account of the coordination mechanisms of organized accounts (Keller et al., 2020), a systematic review of online organizational propaganda (Lock & Ludolph, 2020), and a global census of social-media manipulation operations across 70 countries (Bradshaw & Howard, 2019); this strand clarifies "what should not be", but has not designed an ethical and transparent alternative.

The third strand is the study of organizational transparency, which shows that transparency is not a binary state of disclosed/concealed but a manageable and gradable process (Albu & Flyverbom, 2019); a foundation on which the five-principle framework of Section 5.4 is built.

3.2. Research gap

Conceptual gap. No unified theoretical formulation of a "transparent, organized human-distribution network", in which the traditions of network society, social capital, persuasion psychology, and AI ethical governance are combined into a single model, exists in the literature; the literature addresses either the individual influencer or covert operations.

Empirical gap. Scattered quantitative evidence from global reports has not yet been assembled into a coherent argument in support of the efficacy of networked-human distribution.

Governance gap. The existing literature has formulated AI ethics largely at the level of centralized commercial platforms (EU AI Act 2024/1689; UNESCO, 2021); the application of these same frameworks to govern a distributed human-AI network with a much lower degree of central concentration has not been conceptualized in the literature.

Contextual gap. The existing literature has been produced largely within the context of Western democracies and a free platform economy, and does not offer an operational framework for contexts under sanctions or algorithmic deplatforming.

4. Method

4.1. Overall design: A documentary-library method with secondary data analysis

This study rests entirely on a **documentary-library method** and the **secondary analysis of established quantitative data**; no first-hand data (interviews, surveys, experiments) were collected. Document analysis is a systematic method for evaluating and interpreting documents that, because the data were produced independently of the researcher, is immune to reactivity bias (Bowen, 2009); secondary analysis is the systematic use of existing, validated data to answer new questions (Johnston, 2014). On this basis, the article belongs to the category of conceptual-theoretical research: its findings are interpreted at the level of model formulation and supporting secondary evidence, and it makes no claim to causal testing.

4.2. Document collection and appraisal protocol

- **Systematic search.** The Scopus and Web of Science databases were searched using combinations of the keywords *micro-media*, *influencer networks*, *decentralized media*, *two-step flow*, *astroturfing*, *soft power*, *choice architecture*, and *AI governance*, for the period 2000–2025; foundational classic works were additionally identified through backward citation tracking.
- **Inclusion criteria.** Peer-reviewed journal articles, books from academic publishers, and reports of international institutions with a stated methodology.
- **Quality appraisal.** Each document was assessed against Scott's four criteria: *authenticity* (provenance and genuineness), *credibility* (accuracy and sincerity of the producer), *representativeness* (typicality relative to the corpus of documents), and *meaning* (clarity and comprehensibility) (Scott, 1990).
- **Analysis.** Qualitative content analysis was conducted using the standard procedure of coding and category extraction (Krippendorff, 2018); cognate categories were aggregated into the five theoretical layers of Section 2 and the model constructs of Section 5.

4.3. Secondary quantitative data sources

To assemble secondary evidence relevant to networked-human distribution, the article uses sources with stated methodologies (Table

2), while recognizing that they differ in independence and evidentiary weight. Peer-reviewed studies and official intergovernmental statistics are treated as stronger descriptive evidence; corporate surveys, industry reports, and multi-source commercial compilations are used only as contextual indicators and not as independent proof of efficacy. The scholarly use of Google Trends as a tool for measuring public attention is well established in the methodological literature: from predicting economic indicators using search data (Choi & Varian, 2012), to systematic reviews of its research applications (Jun et al., 2018), to standardized frameworks for reporting search parameters (Mavragani & Ochoa, 2019). All query parameters used here— the exact search term, geography, time range, search type, and access date— are reported in Table 3; however, reproducibility does not eliminate the construct distance between these search terms and the article's broader claim about news distribution.

Table 2. Secondary quantitative data sources, data type, and use in the article's argument

Source	Data type	Variable measured	Use in the argument
Google Trends	Relative search-volume index; global; 2004–present	Trend in public attention to media-related concepts	Contextualizing attention to selected media forms (Table 3)
Reuters Institute Digital News Report (Newman et al., 2024)	Annual survey; 47 markets; tens of thousands of respondents	Primary news source by age and country; rate of active news avoidance	Documenting the decline of linear distribution, the rise of individual newsbrands, and the differentiated generational pattern
Edelman Trust Barometer (Edelman Trust Institute, 2023; 2024)	Annual survey; 28 countries; more than 32,000 respondents	Institutional trust rankings; income-related trust differences	Contextual evidence on reported institutional trust. As a corporate survey series, it is interpreted cautiously and not treated as a stand-alone measure of trust migration.
ITU official statistics (ITU, 2024)	Official intergovernmental statistics; global	Global online population	Establishing the necessary connectivity substrate for a human network

Source	Data type	Variable measured	Use in the argument
Digital 2024 Global Overview (Kemp, 2024)	Annual multi-source compilation; global	Active social-media identities	Contextual scale indicator for horizontal distribution. 'Active social-media identities' may include duplication and are not equivalent to unique persons.
Census of organized manipulation (Bradshaw & Howard, 2019)	Systematic documentary analysis; 70 countries	Number of countries with coordinated operations	Establishing the necessity of an auditable distinction from astroturfing
Nielsen Global Trust in Advertising Survey (Nielsen, 2015)	Survey; 60 countries; more than 30,000 respondents	Trust in recommendations from acquaintances versus official channels	Classic contextual evidence on reported trust in acquaintances. Its age and corporate-survey status preclude treating it as current or causal evidence for this model.
Iranian online media surveys (Maleki, 2021; 2023)	Online surveys using weighting; 2021: more than 27,000 responses overall; 2023: 38,445 respondents within Iran	Reported trust in media and use of media sources	Contextual evidence for Iran, subject to online-recruitment and population-coverage limitations

5. Proposed model and supporting evidence

5.1. Proposed operational definition and three-tier architecture (Response to RQ1)

a) Micro-Media Network. A transparent, three-tier trust-repair network through which genuine human actors, participating by choice and with disclosed institutional relationships, evaluate, contextualize, re-narrate, or reject source-transparent base media content within their social networks. The aggregate outcome emerges from distributed micro-level editorial actions. The parent institution remains identifiable as a source, but it cannot compel endorsement by intermediary nodes. The model is normatively available only after demonstrable reform in the parent institution's editorial conduct and therefore decentralizes distribution and mediation rather than claiming the complete absence of organizational power.

Why three layers, and not two or four? The answer lies in the

combination of two seemingly conflicting necessities. The first necessity is the preservation of quality control and value coherence, which, at the minimum possible level, is achieved through a professional-organizational layer; those who work within the media institution and bear direct organizational responsibility. The second necessity is broad geographic-social coverage and perceived proximity to the audience, which is feasible only through a large, open civic network. Between these two necessities, an intermediate layer is essential: those who do not work for the central institution but possess professional credibility; physicians, teachers, clergy, university faculty, entrepreneurs, and cultural activists. This tripartite structure responds to Granovetter's theory of bridging (Section 2.2), and creates a balance that no two-tier network could achieve.

Comparable patterns, framed within different literatures, can be found in successful international examples. At the *BBC*, the Local News Partnership funds up to 150 Local Democracy Reporter posts in local news organizations, which share the resulting journalism across the partnership (*BBC*, 2020); at ARD in Germany, local "permanent freelance collaborators" (Freie Mitarbeiter) have formed a semi-official layer that has been extensively studied in the German-language literature (Mast, 2018); and in pre-information-revolution Iran, the network of honorary correspondents for major newspapers in provincial towns had a similar structure (Motamednejad, 2010). The fundamental difference between the model of this article and these examples lies in two points: reliance on network logic rather than hierarchy, and equipping each node with an AI co-pilot (Section 5.1.1).

b) First layer—the organizational core. The innermost ring consists of professional staff of the public or state media institution; journalists, producers, analysts, presenters, and senior editors. A mature national implementation might involve approximately 5,000–10,000 active accounts, but this range is a planning scenario rather than an empirical finding: it must be recalculated from the institution's eligible workforce, voluntary uptake, activity thresholds, and attrition. The EBU's Eyewitness News Principles and Guidelines provide a professional comparator for source verification, attribution, informed consent, and correction when working with content from civic contributors; they do not provide an empirical basis for this node range (EBU, 2018). The organizational identity of this layer is always disclosed; source transparency, corrigibility, and professional quality are its defining characteristics.

c) Second layer—the ring of professionally autonomous civic intermediaries. This ring consists of specialists from civil society who do not work for the media institution and whose primary commitment is to professional truthfulness and public service rather than to automatic agreement with the institution: physicians and healthcare workers, teachers and trainers, clergy and seminary scholars, university

faculty, cultural and artistic actors, entrepreneurs, regional athletes, and tribal-ethnic elders. A 50,000–100,000-node range is retained only as a full-scale planning scenario; it requires validation through estimates of the addressable professional population, recruitment and consent rates, sustained activity, geographic coverage, and attrition. These nodes differ from conventional influencers in that their credibility derives primarily from professional expertise; their institutional relationship is disclosed; and they retain the right to question, correct, contextualize, or reject base content. Any AI assistance remains subordinate to their judgment and is disclosed where materially used (Abidin, 2018; Bishop, 2025).

d) Third layer—the volunteer civic network. The broadest ring consists of citizens who, without holding a particular professional position, participate as cultural companions. A mature network might involve several hundred thousand registered participants, but this is a scenario target, not a value derived from the cited comparative literature. Any estimate must distinguish registered, occasional, and sustained participants and model recruitment, retention, and inactivity. Comparative accounts of connective action indicate that large-scale civic mobilization is possible but do not establish the appropriate size of this network (Bennett & Segerberg, 2013; Tufekci, 2017). The 90-9-1 participation heuristic is used only to structure testable roles—ambassadors, occasional companions, and interested listeners— not to predict exact membership (Nielsen, 2006).

e) Topology and connection rules. At the macro level, the network is proposed as a hybrid topology with small-world reach and a limited number of high-connectivity hubs; whether scale-free properties emerge is an empirical question rather than a design fact (Barabási & Albert, 1999; Watts & Strogatz, 1998; Newman, 2018). Short average paths are treated as a design target to be measured in pilots, not as a guaranteed six-hop maximum. Four provisional connection rules operationalize the topology: voluntary horizontal connection within tiers; referral-based cross-tier connection subject to transparent criteria and appeal; geographic decentralization, with a pilot target of at least 30% of nodes outside major metropolitan areas in response to the risk of capital-centric concentration (Roshandel Arbatani, 2018); and diversity of styles, viewpoints, and cultural tastes. Cross-tier mobility based on content quality, external credibility, and peer endorsement is publicly documented and auditable.

f) Fundamental design principle. The three tiers form a complementary but contestable fabric: the core supplies disclosed institutional expertise; the professional ring supplies specialist-local scrutiny; and the civic network supplies horizontal proximity and feedback. Decentralization here means distributed dissemination, contextualization, correction, and refusal; not the disappearance of the parent institution or of agenda-setting power. Because the core can still

shape the supply of base content, safeguards for intermediary autonomy and external oversight are constitutive features of the model rather than optional additions.

5.1.1. Bounded AI co-pilot

The AI co-pilot assists nodes with source retrieval, fact-check prompts, drafting alternatives, accessibility, and disclosure labels, but it does not auto-publish, issue individualized persuasion instructions, or construct cognitive profiles of audience members. Every output remains subject to human review; material AI assistance is traceable; and the node retains responsibility and the right to reject the suggestion. System logs available to authorized auditors record model version, prompt class, source links, human edits, and publication decisions while minimizing personal data. These limits operationalize the principle of a "suggesting companion, not decision-substitute" and create an auditable barrier against hypernudge.

5.2. Secondary evidence relevant to networked-human distribution (Response to RQ2)

5.2.1. Search-trend evidence (Google Trends)

Table 3 reports the reproducible queries used in this article. In keeping with methodological recommendations (Mavragani & Ochoa, 2019), the analysis concerns long-term directional patterns rather than instantaneous index values, because the Trends index is relative and normalized to the selected range. These terms are nevertheless loose proxies: "influencer" and "podcast" include substantial non-news uses, while a decline in "TV guide" searches may reflect interface and search-habit changes rather than a decline in centralized news distribution. The Trends analysis therefore indicates changing public attention to media forms; it does not directly measure news consumption, trust, persuasion, or the efficacy of this model.

5.2.2. Survey and statistical evidence

Taken together, these strands provide contextual triangulation across search attention, multinational surveys, official connectivity statistics, reported news-consumption patterns, and commercial investment. Their convergence supports the plausibility and social relevance of networked-human distribution as a general phenomenon, but it is not a substitute for testing the proposed architecture. The sources are not equally independent: corporate trust surveys, commercial compilations, and industry benchmark reports are interpreted cautiously and alongside peer-reviewed or official evidence. None of the sources establishes that this network will restore trust, outperform centralized distribution, or produce the claimed outcomes in the national-broadcaster context.

Table 3. Reproducible Google trends queries and their documented directional patterns

Search term	Parameters	Documented directional pattern	Interpretation within the model
influencer	Global; 2004–present; web search	Steady, multi-fold growth in attention, accelerating from the mid-2010s	The shift of public attention toward individual message-distribution actors
podcast		Long-term upward trend, with a jump after 2019	Growth of personal audio channels relative to centralized broadcasting
TV guide		Secular decline (sustained long-term decrease)	Decline of the linear, schedule-based viewing paradigm
Influencer marketing		Emergence from near-zero in the mid-2010s, followed by sustained growth	Institutionalization of the economy of human message distribution

Note. Access date: June 2026. The Trends index is relative (0–100) and may change with the selected date range, geography, term/topic choice, normalization, and subsequent search data. The table records a reproducible exploratory comparison, not a validated scale of institutional-to-human news migration (Jun et al., 2018).

Table 4. Selected secondary indicators relevant to networked-human distribution

Quantitative evidence	Source	Implication for the model
Approximately 83% of respondents across 60 countries trust recommendations from people they know more than any other channel	Nielsen (2015)	A classic indication that familiar-source recommendations can be highly trusted; it does not establish current effect size or the efficacy of this model.
Active news avoidance rose from 29% (2017) to 39% (2024); social media and video platforms are the leading news source for young people in most surveyed markets; sustained decline of television and the press; growth of individual newsbrands	Newman et al. (2024)	Attention has migrated from centralized channels to personal channels, and this migration is accompanied by active avoidance of institutional news
Media trust was 50% in 2024, below business, NGOs, and government; the 2023 report documented an income-related trust divide	Edelman Trust Institute (2023; 2024)	Institutional trust differs across social contexts; these surveys do not establish that trust will transfer automatically to state-associated intermediaries.
Approximately 5.5 billion internet users and more than 5 billion active social-media identities; identities are not necessarily unique persons	ITU (2024); Kemp (2024)	A large connectivity substrate exists, but connectivity alone does not establish willingness to participate, trust, or model efficacy.

Quantitative evidence	Source	Implication for the model
The report estimated the influencer marketing industry at US$21.1 billion in 2023 and projected US$24 billion for 2024	Influencer Marketing Hub (2024)	Commercial expenditure indicates institutionalized use of influencer distribution; an interested industry report does not independently validate persuasion effectiveness or this model.
Identification of organized social-media manipulation operations in 70 countries (compared with 48 countries the previous year)	Bradshaw & Howard (2019)	Governments have, in practice, recognized the efficacy of networked distribution; an auditable ethical distinction is essential
Reported trust in IRIB (a lot or to some extent): approximately 14% in the 2021 report and 21% in 2023; the surveys differ in recruitment and composition	Maleki (2021; 2023)	Both reports indicate substantial distrust within their target populations; the comparison neither establishes a continuous trend nor tests the proposed model.

5.3. Eight hypothesized advantages of decentralized distribution

The following advantages are theoretically derived expectations. They specify mechanisms and outcomes for subsequent pilot testing; they should not be read as demonstrated properties of the proposed three-tier model.

- **Horizontal trust in place of vertical authority.** A message from a familiar, similar source is more effective than the same message from an official institution (Katz & Lazarsfeld, 1955; Nielsen, 2015; Pornpitakpan, 2004).
- **Structural resilience.** The absence of a single point of failure: removing or filtering any one node does not disable the network as a whole (Baran, 1964; Barabási & Albert, 1999).
- **Resistance to algorithmic deplatforming.** Distribution through thousands of genuine personal accounts breaks dependence on the algorithmic decisions of any single platform (Castells, 2013).
- **Access to distant clusters.** The numerous weak ties of the civic layer carry the message to communities the official channel cannot reach (Granovetter, 1973).
- **Scalability at non-linear cost.** Network growth is organic; the marginal cost of each new node is close to zero (Benkler, 2006).
- **Linguistic and cultural localization.** Re-narration of the message by the nodes themselves makes adaptation to local dialect, culture, and context endogenous.
- **Auditable transparency.** The public disclosure of the network's structure and the real identities of its nodes builds long-term legitimacy and credibility (Albu & Flyverbom, 2019; Diakopoulos, 2019).
- **Soft-power capacity.** Attractiveness distributed through credible

actors is the classic mechanism for generating soft power (Nye, 2004).

5.4. The five-principle governance framework: The boundary with astroturfing and the hypernudge limit (Response to RQ3)

The scientific and ethical credibility of the model hinges on its demonstrable distinction from two neighboring theoretical risks. On one side lies covert manipulation, whose documented census has identified it in 70 countries (Bradshaw & Howard, 2019); on the other side lies hypernudge; the continuous personalization of choice architecture that renders the condition of transparency practically unattainable (Yeung, 2017). A human-distribution network that has wide mobilization capacity and is equipped with an AI assistant could, if it proceeds without deliberate design, be pushed toward either of these two poles. The boundary against both poles can be secured not by relying on the "good intentions of the designers" but through an explicit ethical framework, structural transparency, and independent audit mechanisms.

The point of departure for this framework is Susser, Roessler, and Nissenbaum's definition of the boundary between influence and manipulation (Section 2.4): legitimate influence has a clear purpose, does not exploit cognitive vulnerability, is transparent with the audience, and aligns with their interests; manipulation is the violation of at least one of these four conditions (Susser et al., 2019). The five principles below translate this four-element definition into design requirements, and have been formulated in critical dialogue with the European Union's AI Act (Regulation (EU) 2024/1689) and UNESCO's (2021) *Recommendation on the Ethics of Artificial Intelligence*.

Principle One: Structural transparency. The existence of the network, its guiding principles, and its governance framework are set out in a public document accessible to all; this document is not a ceremonial declaration but a living one, in which every substantive change is recorded. This design draws on Article 50 of the EU AI Act and the UNESCO Recommendation's provisions on transparency and explainability (paras. 37–41), while adopting a broader voluntary disclosure standard rather than claiming that either instrument universally mandates every feature of this model (European Union, 2024; UNESCO, 2021; Diakopoulos, 2019). In practice, each node discloses its membership and tier (core/ring/network) in its public profile, and content suggested by the AI assistant, as specified in Section 5.1.1, is marked with a traceable indicator.

Principle Two: Cognitive non-harm. In its design and operation, the system must not cause cognitive harm to any individual or to society; a principle carried over into the AI literature from the medical-ethics tradition of *primum non nocere*. In practice, this principle is expressed through several sub-principles: preventing filter bubbles, so that each

node's audience experiences a sufficient diversity of viewpoints (Pariser, 2011; Helberger et al., 2018); avoiding "addictive" design in favor of "meaningful value creation" (Williams, 2018); avoiding the intensification of polarization, referred to in the commercial-platform literature as "engagement-maximization bias" (Stray et al., 2021); and providing special protection for vulnerable groups.

Principle Three: Cognitive autonomy. The audience of the network is not a means but an end — a Kantian principle known in the contemporary AI-ethics literature as "preserving autonomy" (Floridi et al., 2018). In practice, this principle means that the system never seeks to substitute for the audience's decision, but instead creates a context in which a more informed decision is available to them; content personalization is bounded within reasonable limits so as not to approach hypernudge (Yeung, 2017), and media-literacy tools are made available to the audience in line with a strategy of "boosting alongside nudging" (Hertwig & Grüne-Yanoff, 2017).

Principle Four: Reversibility and the right of exit. Every form of participation, at every tier, must be terminable without undue consequence, and personal-data retention must be limited and accountable. Article 17 of the General Data Protection Regulation provides a legal reference point for erasure, subject to its specified conditions and exceptions, rather than an unconditional right to delete every record (European Union, 2016). In practice, the network avoids exit friction and provides a clear deletion procedure, with any necessary retention for legal obligations or public accountability explained in advance; this complements the emphasis on freedom of choice in choice architecture (Thaler & Sunstein, 2021).

Principle Five: Proportionality of intervention. The degree of the network's cognitive intervention must be proportionate to the strategic importance of the subject matter; a principle known in public law as "the principle of proportionality" and developed within the Kantian tradition of AI-ethics literature (European Commission High-Level Expert Group on AI, 2019). For everyday matters, intervention is minimal; for strategic matters, greater intervention is more justifiable, but always in balance with the preceding four principles.

These five principles are not a list of independent rules but an interactive ethical fabric: none, on its own, is a complete answer, and none can be realized without the other four. Table 5 illustrates this fabric along two dimensions — the boundary with astroturfing and the hypernudge limit.

The implication of this framework is conditional: a network that does not satisfy these five principles and the oversight requirements below cannot claim the normative status defined in this article. Failure of transparency or autonomy does not automatically prove that every operation is astroturfing or hypernudge, but it removes the model's claimed auditable distinction and creates a presumption of high

manipulation risk. Independent oversight is therefore a constitutive condition rather than an optional supplement.

Table 5. The five-principle governance framework: Practical requirements, the boundary with astroturfing, and the hypernudge limit

Principle	Practical requirement	Boundary with astroturfing	Hypernudge limit
Structural transparency	Public disclosure of the network's structure, each node's tier, and the marking of AI-suggested content	Real individuals with verifiable identities, as opposed to complete concealment of the structure	A shared, publicly debatable architecture, as opposed to an invisible, personalized architecture
Cognitive non-harm	Preventing filter bubbles and polarization; protecting vulnerable groups	Strengthening public discourse, as opposed to the goal of manipulating public perception	Avoiding the maximization of engagement at the expense of cognitive health
Cognitive autonomy	Preserving the right to decline any suggestion without negative consequence; priority of boosting	Re-narration of base content in each node's own personal tone, as opposed to uniformity of content	Limiting personalization to preserve the capacity for informed decision-making
Reversibility and right of exit	A frictionless exit option; data deletion	The right to decline any suggestion without negative consequence, as opposed to centralized command and control	Genuine exitability, not merely leaving the platform altogether
Proportionality of intervention	The intensity of intervention proportionate to the strategic importance of the issue	The aim of strengthening public discourse, not manipulating perception	Preventing every everyday interaction from becoming a point of cognitive intervention

5.4.1. Polycentric oversight and conditions of independence

a) Independent public trust council. Oversight is led by a legally constituted council outside the network's chain of command. A majority of its voting members must be neither government officials, employees of the parent media organization, nor active network nodes. Seats are distributed among independent media and communication scholars, journalists, legal and AI-ethics experts, professional associations, civil-society organizations, regional and minority representatives, and randomly or transparently selected audience representatives. Members serve staggered, non-renewable terms; appointments are made through

multiple nominating bodies; conflicts of interest and meeting records are public; and removal requires stated cause and review.

b) Institutional powers and resources. Independence requires a protected multi-year budget, autonomous staff, access to source trails, editorial directives, campaign instructions, aggregate distribution data, AI-assistance logs, correction records, and documented complaints, subject to privacy and security safeguards. The Council can initiate random and complaint-based audits, require a published response or correction, recommend suspension of a campaign or node, and issue uncensored periodic reports. If these appointment, funding, access, and publication conditions cannot be met, the network may remain an organizational communication project but cannot claim the normative designation advanced by this model.

c) Distributed public oversight. Every disclosed network message provides a structured public evaluation channel covering source transparency, factual support, distinction between news and opinion, representation of material counter-evidence, perceived manipulative pressure, and change in trust. Public ratings are signals of audience experience and anomaly detection—not verdicts on truth. Like/dislike totals cannot determine factual status because they are vulnerable to popularity effects, coordinated brigading, fake accounts, ideological sorting, and majority pressure. Rate limits, identity and bot-abuse safeguards, publication of response distributions, reasoned reports, and protection of minority viewpoints are therefore required. Thresholds trigger expert review rather than automatic suppression or promotion.

d) Independent academic-technical audit and redress. Accredited university or multi-institutional teams periodically test factual accuracy, correction speed, viewpoint diversity, node autonomy, coordinated behavior, public-rating manipulation, privacy protection, and AI compliance. Researchers receive privacy-preserving data sufficient for reproducible analysis and publish methods and aggregate results. Audiences and nodes have accessible complaint and appeal routes, and a public dashboard reports substantiated complaints, corrections, audit findings, institutional responses, and unresolved disagreements. Together, the Council, distributed public oversight, and academic-technical audit form a polycentric monitor that does not depend on any single institution's declaration of independence.

5.5. Conditional soft-power pathways after institutional trust reform (Response to RQ4)

Joseph Nye defines soft power as the capacity to shape preferences through attraction rather than coercion or payment (Nye, 2004). Inherited distrust imposes a prior constraint: a state-associated network cannot generate attraction merely by relocating an institutional message into interpersonal channels. The following pathways become plausible only if editorial reform is sustained, institutional sponsorship is

disclosed, intermediary autonomy is observable, and compliance with Section 5.4 is independently audited. They are conditional propositions for empirical evaluation, not demonstrated outcomes.

First pathway: Diaspora communities. Persian-speaking and culturally or religiously affiliated communities are dispersed globally. The manuscript does not assume that a state-associated network can reproduce the trust enjoyed by non-state or diaspora media simply by adopting a horizontal tone. Diaspora engagement would require disclosed sponsorship, locally autonomous nodes, reciprocal agenda-setting, the right to criticize the parent institution, multilingual correction mechanisms, and evidence that audiences perceive reform as credible. The success of external Persian-language networks demonstrates the importance of proximity and transnational access, but it is not evidence that their trust can be transferred to this model (Semati, 2019; Sreberny, 2023).

Second pathway: Regional languages and dialects. Re-narration of base content by local nodes naturally translates and localizes it into regional languages and dialects; a capacity that no centralized translation system could reproduce with the same authenticity, and which activates, at a transnational scale, precisely structural advantage 6 from the eight-advantages table (Section 5.3).

Third pathway: Inter-network coalitions. Micro-Media Networks in different countries could connect through individual nodes around disclosed public-service purposes. Such inter-network connections correspond to switching and network-making power in Castells's framework (Castells, 2011). In the model proposed here, a coalition would remain subject to reciprocal autonomy, disclosed sponsorship, and independent oversight.

The decisive point across all three pathways is what the governance framework of Section 5.4 makes testable rather than guarantees. Transparency is necessary but may be insufficient where the institutional speaker carries an inherited trust deficit; disclosure can initially reproduce or even intensify skepticism. Soft power can emerge only through a sustained record of truthful performance, visible correction, pluralism, node autonomy, and reciprocal engagement. A transnational network that conceals sponsorship or simulates spontaneous support becomes vulnerable to the coordinated-manipulation critique identified in the astroturfing literature (Bradshaw & Howard, 2019).

6. Discussion

The findings of this article can be read at three levels: theoretical, empirical, and normative.

At the theoretical level, the article's principal contribution lies not in any one of the five traditions employed but in the logic of their combination. Castells's network society, Putnam and Granovetter's

social capital, persuasion psychology, and choice architecture are each, within their own literatures, large and independent traditions; their combination into a single integrated model is rarely seen in the existing literature (Section 2.5). The key point is that these traditions occupy different levels of analysis and are not in conflict: the apparent tension between Putnam's emphasis on collective capital and Cialdini's emphasis on individual psychology is not an inconsistency but the complementarity of two different levels of analysis.

At the empirical level, the secondary evidence in Section 5.2 shows convergence across several indicators, but the limits of that convergence must be emphasized. Google Trends terms are construct-distant proxies; corporate and industry reports are contextual rather than dispositive; and connectivity, market expenditure, or preference for familiar sources does not demonstrate that this specific architecture will restore institutional trust. The evidence supports the relevance of networked-human distribution as a general phenomenon, not the efficacy of this model, which has not yet been tested in practice. The clearest way to address this gap is a stepped-wedge cluster randomized trial, proposed in Section 7.

At the normative level, the central relationship is between Section 2.4 (hypernudge as a risk) and Section 5.4 (the five-principle framework and polycentric oversight as a response). Persuasion psychology, choice architecture, and AI assistance can support accessible communication but can also enable covert or vulnerability-based manipulation. The model therefore treats public disclosure, node refusal rights, AI traceability, an Independent Public Trust Council, structured public evaluation, academic-technical audit, complaint and appeal routes, and uncensored reporting as constitutive mechanisms. Public ratings alone are not an independent monitor and cannot determine truth; they function as distributed warning signals that trigger accountable review.

A complementary point, drawn from Self-Determination Theory, concerns the sustainability of the third layer. Ryan and Deci have shown that durable intrinsic motivation forms only when the three basic needs of autonomy, competence, and relatedness are satisfied within the context of the activity (Ryan & Deci, 2017; Deci & Ryan, 2000). The implication of this framework is a design warning: if the participation of third-tier citizens is structured mainly around conditional financial rewards, the risk of the "overjustification effect"— whereby extrinsic rewards diminish the intrinsic motivation for a valued activity— becomes a persistent structural risk (Deci et al., 1999). In other words, the long-term sustainability of the civic layer is not merely a financial issue but a matter of psychological design; a consideration aligned with the third principle of the governance framework (cognitive autonomy), in which the sense of "this is my choice" must hold true for the nodes themselves, not only for the audience.

7. Conclusion, Limitations, and Recommendations for future research

7.1. Conclusion

This article formulated the Micro-Media Network as a conditional, three-tier, human-centered trust-repair architecture for a public or state media institution that has undertaken demonstrable editorial reform. Secondary evidence supports the relevance of networked-human distribution in general but does not establish the efficacy of this model. The article proposes eight testable structural advantages, a bounded AI co-pilot, and a five-principle governance framework supported by polycentric oversight. The framework makes the boundary with astroturfing and hypernudge auditable only where institutional independence, public scrutiny, data access, and published redress operate in practice. The soft-power pathways are therefore conditional hypotheses rather than established outcomes.

7.2. Limitations

This study belongs to the category of conceptual-theoretical research grounded in document analysis and secondary data; several limitations must therefore be stated explicitly. First, the evidence demonstrates association and contextual convergence, not causation, and this architecture has not been tested in practice. Second, Google Trends measures normalized search attention rather than news use, trust, or attitude change, and the selected terms have substantial construct distance. Third, Nielsen is relatively old, while Edelman, DataReportal/Kemp, and Influencer Marketing Hub are corporate, commercial, or industry sources whose methodology, incentives, identity-counting conventions, and claims require caution; they are used only alongside scholarly and official sources. Fourth, the Iranian online surveys concern a defined literate adult population; recruitment, coverage, and weighting limitations constrain generalization and comparison across waves. Fifth, the model assumes demonstrable editorial reform in the parent institution, but this assumption must itself be operationalized and empirically verified. Sixth, the proposed oversight design has not been implemented: public ratings are vulnerable to coordinated manipulation and popularity bias, while the Council's independence depends on appointment, funding, access, publication, and enforcement conditions being realized in practice. Seventh, the node ranges are planning scenarios rather than empirically derived requirements.

7.3. Recommendations for future research

The most important next research step is a pilot evaluation with explicit equipoise concerning the intervention's benefits and harms. A stepped-wedge cluster randomized trial, in which clusters cross from comparison to intervention at randomized times, offers one possible

design (Hemming et al., 2015; Hussey & Hughes, 2007). Its suitability depends on adequate numbers of clusters and repeated measurements, adjustment for secular trends, and careful modeling of intervention timing. Because network ties can transmit effects between clusters, the design does not by itself eliminate spillover; recruitment, exposure measurement, and analysis must address this possibility. A pilot in comparable mid-sized cities could assess reach, trust, discursive diversity, and network health before any expansion.

In addition, four complementary lines of research are proposed. First, the empirical measurement of the hypernudge limit: the level of AI-assistant personalization at which communication support remains compatible with cognitive autonomy. Second, a comparative study of the motivational sustainability of volunteer nodes using Self-Determination Theory. Third, institutional stress-testing of the polycentric monitor; including appointment capture, funding pressure, restricted data access, coordinated manipulation of public ratings, protection of minority reports, and the effectiveness of appeals. Fourth, sensitivity analysis for node-range scenarios using addressable population, recruitment, consent, activity, retention, attrition, geography, and network-reach parameters. Without successful independent assessment, the normative validity and scale claims of the model remain provisional.

Conflict of interest

The authors declared no conflicts of interest.

Ethical considerations

The authors have completely considered ethical issues, including informed consent, plagiarism, data fabrication, misconduct, and/or falsification, double publication and/or redundancy, submission, etc. This article was not authored by artificial intelligence.

Data availability

The dataset generated and analyzed during the current study is available from the author on reasonable request.

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