

## INFORMATION HYGIENE IN THE MEDIA SPACE AS A FACTOR OF ENVIRONMENTAL CONSCIOUSNESS OF SOCIETY

<sup>a</sup>IEVGENIIA KYIANYTSIA, <sup>b</sup>OKSANA HOLIK,  
<sup>c</sup>OLEKSANDR KURBAN, <sup>d</sup>DMYTRO YATSIUK, <sup>e</sup>YEVHEN SHKUROV

<sup>a</sup>State University of Trade and Economics, Kyiv, Ukraine

<sup>b</sup>State University of Trade and Economics, Kyiv, Ukraine

<sup>c</sup>Kyiv Boris Grinchenko University, Kyiv, Ukraine

<sup>d</sup>State University of Trade and Economics, Kyiv, Ukraine

<sup>e</sup>State University of Trade and Economics, Kyiv, Ukraine

email: <sup>a</sup>y.kyyanytsya@knute.edu.ua, <sup>b</sup>o.holik@knute.edu.ua,

<sup>c</sup>o.kurban@kubg.edu.ua, <sup>d</sup>dmitriy\_y@ukr.net,

<sup>e</sup>Yevhen.shkurov@gmail.com

**Abstract:** The article presents a model aimed at managing society's information hygiene by addressing risk factors through targeted interventions from social institutions and management entities. The increase in the risk zone is attributed to the prevailing influence of economic values and objectives over non-economic considerations. Both subjective and objective risk factors are identified, with the former manifesting in the dynamic evolution of information and communication technologies on a global scale, and the latter arising from the behavioral motivations of subjects engaging in risky behavior. The authors delineate the parameters for modifying information risks.

**Keywords:** : adherence to information hygiene, modern society, environmental consciousness, social system, information circulation, information risks, information processes, communications.

### 1 Introduction

The current era, marked by "tectonic shifts," presents humanity with a global transformation in civilizational foundations, accompanied by unprecedented dangers and threats. Paradoxically, progress in information and communication technologies, along with the intensification of information influence, has led to fractures and burdens on the social system, causing divisions in social action and within different elements of society. Information, with its multifaceted definitions, undergoes radical changes in form and delivery channels, no longer merely serving as indicative data but rather becoming a potential source of violence against individuals. In opposition to security, violence emerges as its antonym, and the loss of security manifests as the realization of violence. The prevalence of information violence contributes to the reality of information hygiene and the degradation of society's environmental consciousness. The recognition of the problem of information hygiene, reflected in its formalization through legislative and strategic formulations, has delineated the importance of information filtering and highlighted the key areas of protection, such as the health and progress of society.

The proclaimed strategic objectives concerning human information hygiene necessitate prompt resolution and the implementation of effective integrated management mechanisms that can address the challenges posed by the information age. Several tragic events in recent years, attributed by experts to the adverse effects of information on individuals, underscore the social significance of information hygiene in contemporary society. The synthetic approach adopted in scientific inquiries allows for the identification of paradigmatic principles governing the management of society's information hygiene. Efforts to develop applied models that safeguard society and enhance its environmental awareness align with global trends in humanitarian research on global information technologies. Addressing these challenges is crucial to ensure the protection and growth of society's environmental consciousness.

### 2 Literature Review

The contemporary domain of scientific research focusing on information hygiene encompasses investigations into the influence of information processes on human psychological well-being, health, and development. As such, numerous studies (Blanchett, 2021; Ellison, Blackwell, Lampe, Trieu, 2016;

Herrera, López, & Williamson, 2017) have been conducted to assess the adverse effects of information space on individuals. A comprehensive account of the methodological underpinnings of information security and personal hygiene can be found in the works of (McNair, 2007; Slusky, & Parviz-Navin, 2012). These works model information hygiene as an open dynamic system of activities encompassing individuals, groups, and society. The scientific field examines the impact of information and communication technologies, as well as the Internet, on human behavior and classifies threats arising from information (Broersma, & Graham, 2018; Chan, et. al. 2020). Furthermore, it investigates the effects of information and the virtualization of reality on human mental states.

The second segment encompasses the regulatory and legal aspects of research, which address the regulation of information circulation and the media industry. These issues are reflected in various studies by (Brady, et. al. 2017; DePaula, Dincelli, & Harrison, 2018; Goñi, et. al. 2020), emphasizing the importance of securing human rights to a favorable information environment and the exercise of information freedoms. Scholars are investigating various dimensions related to information censorship (Colligan, 2015; Galan, Jordan, Parker, and Taylor, 2019), the balance between guaranteeing and restricting information freedoms, and the criminalization of information exchange phenomena (Figenschou, and Ihlebæk, 2019; Jones-Jang, Mortensen, and Liu, 2021). Furthermore, they explore the significance of information hygiene concerning national security and information policy (Jordan and Weller, 2018; Olsen, Solvoll, and Futsæter, 2022) and examine the legal frameworks supporting self-regulation within the media industry (Kilimnik, I. 2023; Shelukhin, et. al. 2021). Of particular interest are comparative legal studies that delve into foreign experiences concerning information protection (Whitman & Mattord, 2012; Zhao, Xue & Whinston, 2013).

Information ecology is founded on the premise that there exist constraints on an individual's capacity to perceive and process information signals. These limitations give rise to challenges such as information overload, forced communication, unutilized information, and a novel form of pollution. Addressing these concerns necessitates the implementation of hygienic regulatory measures aligned with physiological principles and psychophysiological stress mechanisms. These matters have been subject to an active investigation by a group of authors, including Koval (2017) and Taherdoost (2022).

### 3 Aims

The primary objective of this article is to investigate the social phenomenon of information hygiene within the media space. This study aims to develop methodological and practical recommendations for enhancing society's protection against information overload and excessive exposure. Additionally, the article seeks to establish a comprehensive model for fostering environmental awareness within society.

The study was designed to accomplish the following tasks:

- 1) Analyze the theoretical, methodological, and doctrinal underpinnings of human information hygiene research.
- 2) Investigate the properties and trends of information risks that pose harm to human health and development, specifically considering the implementation of network principles in the information and communication space.
- 3) Examine the practices of both formal and informal control governing the circulation of information in the context of environmental awareness policies.
- 4) Identify the factors contributing to the effectiveness of expert evaluations of information products to enhance the level of information hygiene within society.

#### 4 Research methodology

1. Methods employed to address information hygiene issues can be classified into two categories: quantitative and qualitative. Quantitative assessment of information involves estimating the overall volume of information received, processed, assimilated, and generated by an individual. On the other hand, qualitative assessment of information encompasses various aspects, such as the intrinsic characteristics of the information (varying in levels of novelty, decision-making responsibility, importance, urgency of processing, and potential conflicts), as well as evaluations of its impact on individual biorhythmic activity, typology of higher nervous activity, and human perception of information.
2. Sociological Approach. In contemporary sociological science, well-established approaches exist for comprehending security, such as viewing it as how a social system functions, ensuring the preservation of its integrity, stability, and viability during the interactions among its structural components and subsystems, both internally and with the external environment throughout society's existence and development. Security is considered a qualitative attribute of a social system and a fundamental condition for societal well-being. The essence of security is formalized through the criterion of "absence" – that is, the absence of danger – in the depiction of an object's security status. Indeed, information hygiene is comparably approached in the humanities, but within the context of the distinct aspects of information threats and the dynamics of the transformation within the information space and media domain.
3. General Philosophical Approach. The foundation of information hygiene, akin to hygiene in general, is rooted in dialectical materialism as a comprehensive method of comprehending the world. Within information hygiene, as well as in hygiene as a whole, the following principles are applicable: fundamental general philosophical laws, including the law of transition from quantitative changes to qualitative ones, the law of unity and struggle of opposites, and the law of the negation of the negation. Additionally, general philosophical categories such as causes and effects, necessity and chance, essence and phenomenon, content and form, individual, special, general, part and whole, and possibility and reality, hold relevance in the context of information hygiene. Furthermore, general philosophical methods and techniques of cognition, namely analysis and synthesis, induction and deduction, historical and logical modeling, as well as the systemic and structural approach, find utility in understanding and approaching the complexities of information hygiene.

The law of the transition from quantitative changes to qualitative ones finds frequent application in hygiene. Various environmental factors, including information, can exert either positive or negative effects on the human body only when a specific quantitative level, known as the threshold of action, is attained. Should the actual levels of a factor surpass these thresholds, pathological changes may occur in individuals. Similarly, the law of unity and the struggle of opposites is relevant to information hygiene. Undoubtedly, there exist upper and lower permissible levels of information impact on human health. Both an insufficiency and an excess of information can be detrimental to individuals' well-being.

#### 5 Results

The paradox of the contemporary world order lies in the dual nature of information proliferation: it is an indispensable requirement for the functioning of social systems, while simultaneously posing risks to the social order. Mitigating the hazards arising from individuals' information environment necessitates the active engagement of the majority in diverse forms of interaction with information, media signals, and creative texts. Moreover, information technologies and the media industry themselves have evolved into a source of newfound

power, reliant on the expansion of human attention. The intensification of information processes triggers the acceleration of all social interactions, thereby engendering an ultra-fast reality where everything transpires at a rapid pace (Toepfl, 2020).

Information hygiene, within the context of the contemporary development of the world community, encompasses a synthesis of at least three key areas of sociological thought: a) the theory of socialization, b) the sociology of mass communications, and c) the sociology of security. Consequently, the definition of information hygiene can be expressed as follows: the science of information hygiene in society explores the influence of environmental factors within the information environment on human health, performance, and life expectancy. It formulates standards, requirements, and sanitary measures aimed at enhancing the information quality of communities, living conditions, and human activities (Eryomin, 2020).

Upon intersecting the two identified criteria - the number of individuals reached by a particular communication medium and the periodicity property - the following categorization emerges. We encounter an inadequately developed terminology that only describes three scenarios. First, we have mass periodic communication, known as "mass media," which utilizes specific means for dissemination. Secondly, we encounter mass communication in its entirety, encompassing both periodic and aperiodic segments, referred to as "mass communication media" (MCM) or simply "mass media" (Figueras-Maz, Grandío-Pérez, Mateus, 2021). Thirdly, we encounter general forms of media communication for any number of recipients, periodic or aperiodic, termed "communication media" (CM) or "media" (Rasi, Vuojärvi, Rivinen, 2021). Table 1 provides an illustrative depiction of these distinctions.

Table 1. Types of communication, based on the number of people involved (Johansson & Johansson, 2022; Mengyao, Jingyu, & Chuan, 2022)

Types of communication, based on the number of people involved	Periodic communication	Non-periodic communication	General case
Media - communication means (CM):			
Auto communication	No special term	No special term	No special term
Interpersonal communication	No special term	No special term	No special term
Personal-group and intergroup communication	No special term	No special term	No special term
Mass communication	Mass media (media)	No special term	Mass communication media or mass media

Another challenging aspect that warrants attention at this juncture in the trajectory toward a novel media education concept is the modern interpretation of mass criteria. Phenomena related to mass communication, extensively studied over the past century, are gradually giving way to more expansive communication modalities, often characterized by a non-mass nature. This transition is accompanied by an increasing prominence of media as technical communication tools, prompting qualitative changes in the media landscape. For the effective practice of media education, this implies that, in addition to the theory of mass communication, the curriculum of media teacher training should encompass theoretical modules exploring non-mass forms of mediated communication. These include automedia communication and interpersonal media communication, as well as personal-group and intergroup communication formats.

The emergence of the hyper-information society, coupled with the increasing variety of information signal carrier technologies, including those employed to address epidemiological threats, underscores the necessity of developing dosimetry and hygienic regulations on information exposure in individuals. Additionally, it becomes imperative to manage the speed and concentration of information flow. The exponential growth in communication channels and the corresponding technical means engenders alterations in the information behavior of social groups and serves as a pivotal driver of civilizational transformations and

the evolution of societal consciousness towards ecologization (Anttila Jussila, 2021).

One of the means to promote information hygiene is through media education, recognized for fostering media literacy. Media literacy entails the acquisition of skills to perceive, interpret, evaluate, and generate media texts appropriately. Three distinct approaches to understanding media education can be highlighted:

1. "Injected" or "protective" approach: This approach aims to mitigate the detrimental effects of media on the audience, considering media as an "agent of cultural degradation."
2. Productive approach: Emphasizing the function of media in creating media products, this approach encourages active media production by individuals.
3. Dialogic approach: This approach involves the interaction between media and the audience, focusing on the interpretation of media texts through a process of dialogue and engagement (Berglez, 2016). The "protectionist" approach is deemed most suitable for achieving information hygiene objectives. Nonetheless, this approach faces active criticism from adherents of the other two approaches, who consider it discriminatory and claim that it hinders individuals from expressing their media preferences. Critics also argue that this approach contradicts the "progressive trend" that aligns with principles of equality and freedom.

The approach of conceiving media reality as a hypernetwork integrates both semantic and format elements of risk dynamics. Drawing from the theory of the hypernetwork model of the brain, the object of our study, media reality, can be likened to a cognitive hypernetwork structure. In this analogy, the cogs represent content, which could be information or codes – akin to "mental quanta," while the commas denote the connections that arise from interpreting content through a system of channels. The media reality hypersystem transcends being a mere summation of content and channel characteristics; rather, it represents a fundamentally novel phenomenon. This approach substantiates the broader significance of information hygiene in comparison to conventional information hygiene. This is because threats stemming from media reality encompass risks related to the consumption of information products.

The portrayal of media space as a hypernetwork aligns with the theory of the network society and its distinctive functional logic. The infrastructure of the media hypernetwork is manifest as a "metanetwork, a conglomeration of highways and routes" that interconnects all network actors and establishes network nodes. Empowered by advanced media technologies, individual experiences are amalgamated into collective experiences and vice versa, leading to the transformation of sociality into a novel model.

The structure of media reality is determined by its granularity, comprising signals that can be encoded by human consciousness. This interactive environment involves the interplay between individual consciousness and group consciousness. In this context, individual signals, upon combination, give rise to nodes representing the shared experiences of multiple individuals. These individual signals result from the reception and interpretation of information signals by each individual. This scheme can be depicted as a pyramid, where the node at the apex is formed from comparable interpretations of the signal by different individuals, and the base consists of individual signal reception by each subject. In turn, nodes within the media hypernetwork can coalesce based on common themes, giving rise to groups of nodes. The collective activity of these node groups governs the dynamics of the entire hypernetwork. The compaction or concentration of nodes occurs through the emergence of links, driven by the principle of mutual attraction, analogous to the attraction of molecules that govern matter and communication that underpins society. As connections are formed and attracted to one another, communication within the media hypernetwork becomes increasingly compacted. However,

this simplification has its limits, similar to how the attraction between molecules has boundaries, and it ends when the distance between cogs (individual interpretations of a signal) becomes equivalent to the size of the cog. At this point, just as molecules begin to repel each other, the process of compaction reaches its limits within the media hypernetwork.

The inception of an individual response to a signal necessitates an external formalization process. This entails transforming a thought or idea into content and manifesting it within a network. The velocity of signal reception, i.e., its interpretation, and the subsequent speed of representation corresponds to the rapidity of media hypernetwork node formation. This rate aligns with the promptness of content formulation, which involves translating meaning into a signal or code and subsequently making it visible within the network. For instance, this could take the form of a post on social media, comments, news dissemination, and other similar modes of expression. In essence, the speed can be comprehended through four consecutive orders: firstly, in formulating the meaning of an idea or event (presentation on the network); secondly, in its assimilation by another individual (reception); thirdly, in the construction of an interpretation for a signal (representation); and fourthly, in developing an interpretation for the representation itself (representation of representation). The convergence of the speed of idea formulation (content birth) and its dissemination is facilitated by modern technologies (Fig. 1).

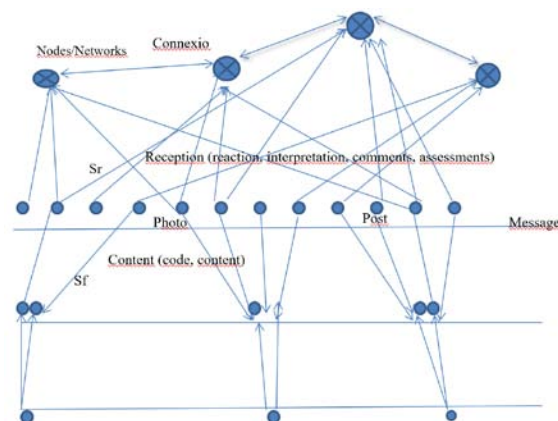


Figure 1. Hypernetwork model of media communications within the framework of information hygiene (developed by the authors)

Let Sf represent the speed of content formulation, referring to the rapidity of its appearance in the network, such as photos and videos taken at the scene of an event. On the other hand, Sr denotes the speed of reception, encompassing the pace of reaction to content (representation), exemplified by comments and assessments. Specifically, Sr comprises directions (lines) that emanate from the content, signifying individual reactions. When these directions are interconnected, they form network nodes, which are essential elements of the media network.

Nodes can interconnect with one another, leading to a continual increase in the number of connections. This growth in connections is facilitated by the accelerated rate of reception (Sr) in comparison to the rate of content formulation (Sf). Reducing the path from content to reaction, known as reaction time, involves minimizing the period between the content's appearance on the network and its perception by the first recipient. Certain forms of content are immediately perceived without the recipient's explicit authorization (e.g., audio advertising, audio products). Thus, the speed of the Sr reaction is influenced by the content's format. Consequently, regulating access to content translates into controlling the growth rate of the Sr reaction. Additionally, the speed of content formulation (Sf), encompassing the journey from idea to actual content, is mediated by technology. Technological advancements enhance the swiftness of idea dissemination into the media network,

thereby directing regulatory efforts toward establishing control over technology.

The hyperset model of media space reveals a notable trend where the moment of an idea's (or event's) inception and its appearance in the public media space coincides with its subsequent interpretation and implementation within the same space. Consequently, the concept of the global information space as a media hypernetwork emphasizes the significance of social control over the traffic of media signals and the properties of their accessibility. This control also extends to accessibility technologies and the flow rate of media signals.

The exploration of the intricate concept of human information hygiene through modeling facilitates the construction of a comprehensive theoretical and methodological framework. This approach aids in identifying the various aspects, interrelationships, and dependencies, ultimately leading to the development of a practical-oriented concept. The proposed resource-vector model of human information hygiene management emphasizes a risk-based approach to comprehending security. Within this model, human information hygiene management is defined as the collective efforts of social management entities to minimize the risks of harm to individuals during their interactions with information.

The model's fundamental principles, vectoriality, and resourcefulness precisely reflect the core dynamics of the subject-object structure in human information hygiene management. Vectoriality entails coordinating the movement of the management object - the risk zone, with the direction of influence from the subject - the management entity. On the other hand, resourcefulness characterizes the intensity of the directed action employed by the management entity. Drawing an analogy between human information hygiene management and the technical sciences, specifically the vector control of an induction motor, provides a relevant and illustrative comparison. This analogy highlights the managerial influence's function, which harmonizes the dynamics of risk zones with the dynamics of management, effectively synchronizing their respective moments. In this context, moments refer to the risks and motives of management subjects. The ultimate goal of the management model is to establish the alignment of these moments (Makedon, et. al., 2019). Within the model, the risk area corresponds to the stator, while the management system, represented by a hierarchical structure of security actors, serves as the rotor.

The observed trends within the risk zone, particularly the management risk zone, reveal the existence of a significant issue concerning the inconsistency and divergence of management impacts and risks. Additionally, the allocation of resources and the nature of the threat to human health and development exhibit inadequacies. These aspects are evident through the emergence of management risks, which originate from general challenges inherent in the management process as a distinct form of social interaction. These risks can be reduced to patterns that manifest in each trend within the management risk zone (Kovach, and Rosenstiel, 2021). The divergence of stator and rotor torques can be attributed to several factors, including limited state legal regulation and the boundaries imposed on the legalization of information exchange relations. The vulnerability of formal control, characterized by a morphological (algorithmic) difference between the object and subject of management, also contributes to this divergence. Furthermore, the merging of status positions and the homogenization of motives among risk subjects and management subjects play a role. The failure of the obligation and responsibility mechanism, mistakes in interpreting the publicity (sociality) of risks, and the latent nature of new threats, rendering them "invisible" for official assessment, add to the complexities. Additionally, there is a noticeable inertia in the formal control response to threats, as well as the aging status of the forms of democratic freedoms in the realm of information exchange. These factors collectively contribute to the divergence observed in the stator and rotor torques within the context of information hygiene management.

The resource-vector model of human information hygiene management aims to address the challenge of devising effective methods for managing the risks of harm to individuals caused by information. This approach involves considering factors such as the sources, nature, and consequences of risks and threats (Grimes, 2020). From the perspective of our study, the primary objective of vector control is to align the dynamics of threats arising from the information space with the dynamics of the system designed to counteract these threats. To achieve this alignment, the model takes into account the rule of the rotor (control system), which interacts with the magnetic field of the stator (risk zone). This coordination encompasses both directions and speeds within the system.

The realization of the resource-vector model of human information hygiene management encompasses not only a hierarchical arrangement of management entities, akin to the system-dynamic concept but also involves aligning the resourcefulness – referring to the extent of powers and competencies – of each management entity with its level of institutionalization. This alignment dictates the level of discretion in the entity's actions, the localization and alteration of control measures, and the variability in its behavior (freedom of action).

Following the accepted approach to comprehending security as a systemic phenomenon encompassing various levels of subject and supra-subject activity, the levels of subjects involved in human information hygiene management within the resource-vector model can be hierarchized based on their available resources and status concerning behavior when interacting with the information space. However, constructing such a hierarchy is challenging due to the ambiguity of a subject's resourcefulness, which might not necessarily align with their administrative power. Additionally, status roles may diffuse, resulting in a management subject becoming a risk subject if incorrect decisions are made, leading to the creation of what is known as "management risk" (Hassan & Hussain, Basit, 2022). As a result, the proposed hierarchical structure remains conditional and flexible, allowing for adaptability (see Fig. 2).

The depicted arrows within the diagram signify the nature of influence and mutual interaction among the subjects during the implementation of activities aimed at ensuring human information hygiene. Each actor is represented to the fullest extent, encompassing various components. For instance, the "state" category comprises legislative, executive, and judicial authorities, as well as controlling, supervisory, and law enforcement agencies. It also includes social protection and crime prevention agencies, along with affiliated organizations like educational institutions. On the other hand, "civil society" encompasses social movements and associations that carry out monitoring functions within the information space (Davidson & Johnson, 2021).

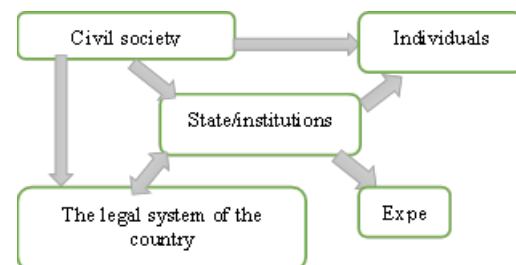


Figure. 2. Interaction of subjects of information hygiene management in the media space (developed by the authors)

As observed, the state, being the most highly institutionalized and possessing administrative power, establishes the regulatory framework for the activities of all other actors, except civil society, and, to some extent, transfers a portion of its institutionalization. In a broader context, all arrows should be bidirectional, as interactions occur to varying degrees. However,

for the sake of simplicity in the diagram, the unidirectionality of the arrows is determined by the dominant influence (Scheerder, Van Deursen, Van Dijk, 2019). For instance, the regulatory control of expert activities holds greater prominence compared to the legal consequences of expertise, such as the activation of state coercion and the establishment of obligations and liability for non-compliance with these obligations.

The activities of management entities in managing human information hygiene can be categorized into two main aspects: risk management about the behavior of risk subjects involved in the production and dissemination of information, which is influenced by their motives; and risk management arising from the accessibility of information products, contingent upon the type of information product and its perception, enabling the potential for restriction and localization of its impact (Fink, 2019).

As previously mentioned, the resourcefulness of management entities encompasses their powers, available response tools (coercive power, financial resources, organizational interconnectedness - accumulative capabilities), and competencies (awareness, qualifications, knowledge, experience, technical equipment) (Johnson, et. al., 2020). Resourcefulness is a critical factor influencing the behavior of the entity's manager, thereby influencing the potential risk to human health and development, making it an essential consideration for managerial risk assessment.

Management measures are categorized based on the behavior of risk actors concerning the dissemination of information products and/or control over access to them. These entities encompass all actors whose actions or inactions contribute to the expansion of the audience consuming information products and/or managing access to them (Swart, 2021). The resource intensity required for a specific management entity to influence the behavior of a particular risk subject is contingent upon the interplay of their legal statuses (subjectivity) and the alignment or opposition of motives between risk subjects and the management entity. For instance, state legal measures against distributors are formulated and implemented through legal regulations, obligations, and coercion, which may include restrictions on the circulation of information products, the establishment of requirements, and the organization of access to them.

The nature of risky behavior, particularly the actions or inaction of risk subjects, and, correspondingly, management influence, are contingent on the characteristics of information products, which collectively contribute to the factors of risk resource intensity, thereby affecting the complexity of management and increasing or decreasing the requirements for management measures. These factors include:

1. The degree of localization of information products in space and time. For instance, products that have spatial boundaries, expressed in the form of a material object, encompass printed materials and entertainment events, as well as information products whose demonstration is limited in space and time (e.g., within specific venues). Managing the risks associated with localized products involves influencing their spatial accessibility to individuals by restricting territorial boundaries for the audience, prohibiting entry, or seizing the products (Myllylahti, 2020). These are considered low-resource risks. On the other hand, other types of information products not confined to specific spaces require more complex response measures, including assessing compliance with broadcast requirements and extensive monitoring of the public information spatio-temporal dimension, as well as auditing government response practices. These types of risks necessitate more extensive resources.
2. Possibilities to automate the management of risks associated with the consumption of information products. Products that can be automatically filtered for malicious content significantly reduce the requirements for

management measures and the resource intensity of the risk. These refer to any products available in digital format. On the other hand, products that do not allow for automated content filtering require the personal involvement of content evaluators and their competencies. For certain management entities, these competencies may not be readily available, thus necessitating the involvement of experts in the process.

3. Possibilities of personalizing the responsibility of subjects of risky behavior concerning information products. Risks arising from the consumption of information products, where the distribution and administration of access can be easily identifiable and personalized, involve relatively simple prevention measures, such as verifying the responsible individuals involved. On the other hand, the challenge of identifying the exact source of the risk and the subjects engaging in risky behavior creates difficulties in personalizing responsibility, especially as a condition for legal liability. This situation is more common in cases of information products that utilize third-party platforms for content dissemination, where there may not be a direct economic connection between the content distributor and the platform owner within the public information space.
4. Speed of media signal delivery, and speed of the delivery channel. Various types of information products possess different speed potentials for delivering content to the organs of perception. The most "fast" types of information products significantly reduce the time required for management response, necessitating higher resource capacities of management entities to cope effectively (Pacheco, Yoong, Lips, 2020). The rate of audience growth among content consumers emphasizes the importance of identifying risks at an early stage, precisely at the first content phenomenon.
5. Replication of information. The extent of information "omnipresence" is contingent on the type of information product and influences the feasibility of managing the risks associated with its consumption. The content delivery channel is characterized not only by speed but also by volume, i.e., its capability to reach the audience (Andersen, Adam, and Dennis, 2021). The presence of multiple versions and diverse formats of the product complicates risk response and prevention efforts, as it requires identifying and addressing all product variations, each potentially with varying degrees of spatial localization. For instance, restricting the circulation of printed materials with harmful content that has been digitally or otherwise reproduced requires searching for versions of them. The resource intensity of the risk of harm from the consumption of information products, the circulation of which is not associated with the expenditure of resources of risk subjects, whether temporary, financial, reputational (anonymity), is higher than from other products and imposes particularly high requirements on management measures and the resource capacity of management subjects.

The effectiveness of human information hygiene management, therefore, centers on devising and implementing risk management measures for delocalized, highly replicated information products. These products entail content (including context and connotations) that necessitates thorough evaluation and filtering, extending beyond automatic processes. Additionally, their circulation lacks personalization, and they exhibit an exceedingly high speed of delivery to the organs of perception (Anttila, 2022). Consequently, the resourcefulness of management entities should encompass the availability and breadth of expert evaluation, technical measures to decelerate speed and circulation, as well as the capacity to formalize and articulate the necessity for these measures. Furthermore, establishing a connection (user verification) between the content author and the platform for its distribution (platform owner) is pivotal in this regard.

The aforementioned characteristics of information products, with risks necessitating significant management resources, highlight

the Internet as the primary source of riskogenic potential for human health and development. This potential enables the localization, circulation, anonymization of content creation and instantaneous delivery of information. As a principal technological advancement of recent decades, the Internet revolves around the majority of societal issues during the transition to a new era, including challenges concerning socio-cultural interactions between individuals and the advancement of environmental awareness within society.

## 6 Discussion

The intensification of information flows, the ubiquity of media signals, and the escalation of hypernetwork logic have introduced a new perspective for understanding information risks and human information hygiene, particularly the risks of eroding traditional mechanisms of socialization and, potentially, social order in the future. Hence, it becomes crucial to formalize the prioritization of society and, consequently, the protection of individuals over the interests of economic institutions, recognizing information hygiene as a vital component of civilizational security. The previous scientific conceptualization of the issue of human information hygiene failed to encompass its essence through the lens of technological expansion and media domestication, the establishment of a pervasive pattern of media consumption and the inundation of living spaces with noise, leading to affective responses instead of rational and critical ones, ultimately resulting in the primitivization of consciousness and mass narration. The issue of quantitative aspects of media consumption and its potentially coercive and violent features has not been extensively discussed in public discourse. The current study aims to fill this gap by analyzing the fundamental nature of risks stemming from information as an object of management, focusing on subjects of social control with varying degrees of institutionalization. A level-by-level approach is proposed to comprehend the system of managing these risks, and the synergistic principle of management is described and justified based on the acknowledgment of limited resources within management structures and the potential for resource redistribution.

## 7 Conclusion

The study provides a theoretical and logical justification for considering the Internet as a public domain accessible to humans. It identifies and refutes mainstream criticisms of the theoretical underpinnings of the concept of human information hygiene. These criticisms include disapproval of classical approaches to socialization and psychophysiological universals within the pedagogical paradigm. Furthermore, it rejects the substitution of media education for security within the media network, the distortion of the original meaning of media ecology, and the postulation of media autonomy as an environment that needs adaptation rather than management. The study also addresses the assertion of the "inalienability" and "naturalness" of the "right" to the Internet while condemning any state intervention in this right. The claim that this right should be included as one of the fundamental principles in the international legal framework for regulating the information sphere is also examined and argued against.

The study elucidates the position of human information hygiene within the framework of scientific knowledge and sociological thought. It demonstrates the approach to addressing this field as a means of enhancing the "quality of society." This enhancement is achieved through technological means that secure the social well-being of individuals, utilizing both established methods and innovative mechanisms that encompass both official and unofficial control. These mechanisms are tailored to suit the characteristics of the hyper-networked reality of the media space. The management of human information hygiene pertains to ensuring the resilience of the social order in response to the weakening of previous social structures and the aging of administrative instruments. This endeavor seeks to safeguard individuals in an ever-changing media landscape and sustain societal stability amid evolving challenges and opportunities.

The authors put forth a model of information hygiene management, which not only enhances the regulatory and conceptual framework of information policy but also encompasses the modernization of the examination process for information products and advertising. This model optimizes law enforcement efforts concerning offenses related to safeguarding individuals from harmful information. Furthermore, it advocates for the reform of social protection systems and neglect prevention, focusing on ensuring the human right to a favorable information environment. The comprehensive understanding of media noise as a unique form of disturbance necessitates interdisciplinary research and the utilization of existing diagnostic and evaluation methods. This study highlights media noise as the second component of harm from information in a child's living space, encouraging further developments that integrate tools from various fields of scientific knowledge. The exploration of this topic is crucial for a comprehensive approach to human information hygiene management and its implications for societal well-being.

The comprehensive exploration of the hyper-networked nature of media space underscores the necessity of implementing relevant research findings and conclusions into the practice of information management and the principles of information and social policy. Achieving these objectives requires conducting research that comprehensively examines the possibilities of safeguarding individuals from both existing and emerging threats. Such research fulfills a crucial role in providing scientific substantiation for managerial and political decisions related to information security and societal well-being.

## Literature:

- Andersen, Kim, Adam Shehata, and Dennis Andersson. (2021). Alternative News Orientation and Trust in Mainstream Media: A Longitudinal Audience Perspective. *Digital Journalism*, 1-20.
- Anttila, Juhani. (2022). The information security challenges of modern society, 14, 65-70. DOI: 10.14529/ped220206.
- Anttila J., & Jussila, K. (2021). Sustainability as an Aspect of Societal Quality. ICSD2021 Conference. New York, USA. Available at: <https://ic-sd.org/events/icsd-2021/>.
- Berglez, P. (2016). Few-to-many communication: Public figures' selfpromotion on Twitter through "joint performances" in small networked constellations. *Annales. Series Historia et Sociologia*, 26(1), 171-184.
- Blanchett, Nicole. (2021). Participative Gatekeeping: The Intersection of News, Audience Data, Newswriters, and Economics. *Digital Journalism*, 9, 773-91.
- Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J. A., Van Bavel, J. J. (2017). Emotion shapes the diffusion of moralized content in social networks. *Proceedings of the National Academy of Sciences*, 114, 7313-7318.
- Broersma, M., & Graham, T. (2018). Tipping the balance of power: Social media and the transformation of political journalism. In A. Bruns, G. Enli, E. Skogerbø, A. O. Larsson, & C. Christensen (Eds.), *The Routledge companion to social media and politics* (pp. 89-103). Routledge.
- Chan, A.K., Nickson, C.P., Rudolph, J.W., Lee, A. & Joynt, G.M. (2020). Social Media for Rapid Knowledge Dissemination: Early Experience from the COVID-19 Pandemic. *Anaesthesia*, vol. 75:12, 1579-1582.
- Colligan, P. (2015). Four Simple Steps to Broadcast Your Message to the Connected Planet. Available at: <https://books.google.com.au/books?id>.
- Davidson, B., & Joinson, A. (2021). Shape shifting across social media. *Social Media + Society*, January-March, 1-11. DOI: 10.1177/2056305121990632.
- DePaula, N., Dincelli, E., & Harrison, T.M. (2018). Toward a typology of government social media communication: Democratic goals, symbolic acts, and self-presentation. *Government Information Quarterly*, 35(1), 98-108.
- Ellison, N., Blackwell, L., Lampe, C., & Triou, P. (2016). The Question exists, but you don't exist with it": Strategic anonymity in the social lives of adolescents. *Social Media*

+Society, October-December, 1-13. DOI: 10.1177/2056305116670673.

13. Eryomin, A.L. (2020). Information hygiene: modern approaches to hygienic evaluation of content and physical signals of information carriers. *Gigiena i Sanitaria (Hygiene and Sanitation, Russian journal)*, 99(4), 351-355. (In Russian). DOI: <https://doi.org/10.33029/0016-9900-2020-99-4-351-355>
14. Figenschou, Tine Ustad, and Karoline Andrea Ihlebæk. (2019). Challenging journalistic authority: Media criticism in far-right alternative media. *Journalism Studies*, 20, 1221-37.
15. Figueras-Maz, M., Grandío-Pérez, M.M., Mateus, J.-C. (2021). Students' perceptions on social media teaching tools in higher education settings. *Communication and Society*, 34(1), 15-28. DOI: <https://doi.org/10.15581/003.34.1.15-28>
16. Fink, K. (2019). The biggest challenge facing journalism: A lack of trust. *Journalism*, 20, 40-43.
17. Galan, Lucas, Jordan Osserman, Tim Parker, and Matthew Taylor. (2019). How Young People Consume News and the Implications for Mainstream Media. Cham. Available at: <http://link.springer.com/10.1007/978-3-319-90281-4>.
18. Goñi, J., Cortázar, C., Alvares, D., Donoso, U., & Miranda, C. (2020). Is teamwork different online versus face-to-face? A case in engineering education. *Sustainability*, 12(24), 10444. DOI: <https://doi.org/10.3390/su122410444>.
19. Hassan, Abul & Hussain, Tanveer & Basit, Abdul. (2022). The Role Of Social Media In Improving Hygiene Practices Among General Public During COVID-19. *Pakistan Journal of Gender Studies*, Vol. 22, 1-12. DOI: 10.46568/pjgs.v22i1.586.
20. Herrera, S.B.Y., López, S.O.P. & Williamson, L.O. (2017). Social media marketing strategy applied to oral hygiene. *Int. J. Odontostomat.*, 11(3), 279-285.
21. Grimes, D.R. (2020). Health disinformation & social media: The crucial role of information hygiene in mitigating conspiracy theory and infodemics. *EMBO Rep.*, Nov 5;21(11), 51819. doi: 10.15252/embr.202051819. PMID: 33155436.
22. Johnson, N.F., Velásquez, N., Restrepo, N.J., Leahy, R., Gabriel, N., El Oud, S., Zheng, M., Manrique, P., Wuchty, S., Lupu, Y. (2020). The online competition between anti-vaccination views. *Nature*, 1-4.
23. Johansson, E., & Johansson, K.M. (2022). Along the government-media frontier: Press secretaries offline/online. *Journal of Public Affairs*, 22(Suppl. 1), e2759. DOI: <https://doi.org/10.1002/pa.2759>.
24. Jones-Jang, S.M., Mortensen, T., & Liu, J. (2021). Does media literacy help identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist*, 65(2), 371-388.
25. Jordan, K., & Weller, M. (2018). Academics and social networking sites: benefits, problems, and tensions in professional engagement with online networking. *Journal of Interactive Media in Education*, 1-9. DOI: 10.5334/jime.44
26. Kilimnik, I. (2023). Information society and information security. New challenges and new ways to overcome information threats. *Uzhhorod National University Herald. Series: Law*, 2, 53-57. DOI: 10.24144/2307-3322.2022.76.2.8.
27. Kovach, Bill, and Tom Rosenstiel. (2021). *The Elements of Journalism, Revised and Updated 4th Edition: What Newspeople Should Know and the Public Should Expect*. New York: Crown.
28. Koval, S.V. (2017). Audialnyyi kontent korystuvachiv [User audio content]. *Tele- ta radiozhurnalistyka*, 16, 178-183. Available at: [http://nbuv.gov.ua/UJRN/Tir\\_2017\\_16\\_26](http://nbuv.gov.ua/UJRN/Tir_2017_16_26) (in Ukrainian).
29. Makedon, V., Zaikina, H., Slusareva, L., Shumkova, O., & Zhmaylova, O. (2019). Rebranding in the Enterprise Market Policy. Proceedings of the 34rd International Business Information Management Association Conference, IBIMA 2019: Vision 2025: Education Excellence and Management of Innovations. through Sustainable Economic Competitive Advantage, 9472-9476.
30. McNair, B. (2007). *An Introduction to political communication*. 4th ed. London: Routledge.
31. Mengyao, Wang, Jingyu, Wang, Chuan, Zhang. (2022). Visual Space System Design in Digital Media Art Design. *Scientific Programming*, vol. 2022, Article ID 3678090. DOI: <https://doi.org/10.1155/2022/3678090>.

32. Myllylahti, Merja. (2020). Paying attention to attention: A conceptual framework for studying news reader revenue models related to platforms. *Digital Journalism*, 8, 567-575.
33. Olsen, R.K., Solvoll, M.K., & Futsæter, K.-A. (2022). Gatekeepers as Safekeepers-Mapping Audiences' Attitudes towards News Media's Editorial Oversight Functions during the COVID-19 Crisis. *Journal*, 3, 182-197. DOI: <https://doi.org/10.3390/journalmedia3010014>.
34. Pacheco, E., Yoong, P., & Lips, M. (2020). Transition issues in higher education and digital technologies: the experiences of students with disabilities in New Zealand. *Disability and Society*, 36(2), 179-201. DOI: <https://doi.org/10.1080/09687599.2020.1735305>.
35. Rasi, P., Vuojärvi, H., & Rivinen, S., (2021). Promoting media literacy among older people: A systematic review. *Adult Education Quarterly*, 71(1), 37-54.
36. Scheerder, A.J., Van Deursen, A., & Van Dijk, J. (2019). Negative outcomes of Internet use: A qualitative analysis in the homes of families with different educational backgrounds. *The information society*, 35(5), 286-299.
37. Shelukhin, M., Kupriichuk, V., Kyrylko, N., Makedon, V., & Chupryna, N. (2021). Entrepreneurship Education with the Use of a Cloud-Oriented Educational Environment. *International Journal of Entrepreneurship*, Volume 25, Issue 6. Retrieved from: <https://www.abacademies.org/articles/entrepreneurship-education-with-the-use-of-a-cloudoriented-educational-environment-11980.html>.
38. Slusky, L. & Parviz-Navin, P. (2012). Student information security practices and awareness. *Journal of Information Privacy and Security*, 8(4), 3-26.
39. Swart, J. (2021). Experiencing algorithms: How young people understand, about, and engage with algorithmic news selection on social media. *Social Media + Society*, 7(2), 1-11. DOI: 10.1177/20563051211008828.
40. Taherdoost, H. (2022). Cybersecurity vs. Information Security. *Procedia Computer Science*, Volume 215, 483-487. DOI: <https://doi.org/10.1016/j.procs.2022.12.050>.
41. Toepfl, F. (2020). Comparing authoritarian publics: The benefits and risks of three types of publics for autocrats. *Communication Theory*, 30, 105-125.
42. Whitman, M.E., & Mattord, H. J. (2012). *Principles of information security* (4th ed.). Boston, MA: Thompson Course Technology.
43. Zhao, X., Xue, L., & Whinston, A.B. (2013). Managing interdependent information security risks: Cyberinsurance, managed security services, and risk pooling arrangements. *Journal of Management Information Systems*, 3(1), 123-152.

**Primary Paper Section: A**

**Secondary Paper Section: AE, AJ**