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Transformation and Development Trends of Environmental Communication in the New Media Era: Postprint

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Abstract

In the new media era, traditional media can no longer meet the demands of environmental communication; it is necessary to leverage new media to achieve efficient communication. This paper will analyze the relationship between the new media era and environmental communication, focusing on exploring the transformation of environmental communication in the new media environment: the environmental communication mechanism has shifted from one-way communication to all-dimensional communication, and the content of environmental communication has shifted from professionalization to popularization; it will examine the development paths and trends of environmental communication in the new media era, namely enhancing environmental communication capabilities through new media, using new media to guide a broader population to participate in environmental protection, and innovating environmental communication through new media; at the same time, it will explore how to utilize new media to construct a shared platform for multi-stakeholder exchange, pool the strengths of all parties, form a synergistic force for environmental communication, promote the development of environmental protection throughout society, with the aim of contributing to the achievement of the “Beautiful China” goal.

Full Text

Abstract

In the new media era, traditional media can no longer meet the demands of environmental communication, necessitating the use of new media platforms to achieve efficient dissemination. This paper analyzes the relationship between the new media era and environmental communication, focusing on the transformations occurring in this domain: the communication mechanism has shifted

from one-way transmission to full three-dimensional communication, while content has transitioned from professional to popularized. The study examines developmental pathways and trends in new media environmental communication, including enhancing communication capacity through new media, guiding broader public participation, and fostering innovation in environmental communication practices. Simultaneously, it explores how to leverage new media to build shared platforms for multi-party exchange, pooling collective forces to form synergies in environmental communication and advance environmental protection across society, thereby contributing to the realization of the “Beautiful China” vision.

Keywords: new media; environmental communication; development trends

1. Problem Background

Environmental protection has become a prominent issue in contemporary society, attracting widespread public attention. Its dissemination and development inevitably rely on media power. In recent years, rapid technological advancement has driven the transformation of environmental communication platforms toward new media, triggering a series of changes in environmental communication practices. Clarifying definitions and connotations while mapping developmental pathways and trends in the new media environment can facilitate the popularization and efficiency of environmental communication, bring environmental protection actions into public view, engage more people in ecological and pollution issues, enhance public environmental awareness, update environmental concepts, build effective communication bridges between society and government, and form synergies for environmental protection—all of which are crucial for advancing China’s environmental protection endeavors.

Three key contextual factors shape this landscape. First, **policy orientation:** The 18th National Congress of the Communist Party of China formally introduced the “Beautiful China” concept, emphasizing the prominent position of ecological civilization construction across all aspects, including economic development, to ensure sustainable national development. This elevated environmental protection to a national strategic priority. Second, **development stage:** China’s economy has experienced rapid growth and moved beyond the period of sacrificing environment for development. Industrial development has shifted from extensive to intensive modes, placing China in a critical transition period where environmental protection is essential for sustainable development. Third, **social reality:** The conflict between society’s demand for ecological preservation and the side effects of industrial development has become unprecedentedly acute, yet public environmental awareness remains insufficient, hindering the implementation of environmental measures. Consequently, environmental protection has become an urgent imperative.

Fundamentally, environmental issues are ideological in nature. Environmental

communication, broadly defined, involves disseminating environmental information to address these issues at the ideological level. This concept encompasses a wide range of content, including environmental conditions, ecological crises, environmental incidents, environmental culture, environmental consciousness, policy decisions, legal frameworks, environmental industries, and public participation. As media constitutes a necessary condition for information dissemination, environmental communication must rely on media platforms. With revolutionary advances in emerging technologies, new media is gradually replacing traditional media. To achieve better communication effects, leveraging new media for environmental communication has become essential.

In 1967, Goldmark first proposed the concept of new media, while Wu Xinxun defines it as “media that achieve unprecedented communication functions through new technologies, or that represent a qualitative transcendence of existing media in terms of traditional technology and functionality.” New media has diversified forms of propaganda, with the internet and mobile phones becoming dominant platforms. Environmental communication platforms are transitioning from traditional to new media, with transmission modes evolving from simple point-to-face chain communication to complex point-to-network systems. This shift demonstrates immense potential and advantages for environmental communication through new media.

First, new media creates significant opportunities for efficient environmental communication. In the current new media era, environmental communication must harness these platforms to keep pace with the times and achieve better results. New media can maximally break down geographical barriers among audiences, connecting people as a network and substantially expanding the coverage of environmental information. This enables diverse populations across different regions to access rich environmental information in real time, rather than limiting such information to professional circles.

Second, new media dramatically increases the speed of environmental information dissemination while reducing costs. For instance, the 2010 documentary *Waste Siege* garnered millions of views within a short period through Weibo and WeChat, rapidly sparking widespread online discussion about environmental issues. This illustrates the undeniable role of social networks, microblogs, and WeChat public accounts in promoting environmental causes. Utilizing new media enables efficient environmental communication with multiplier effects, playing a crucial role in enhancing citizens’ environmental awareness and boosting public enthusiasm for participation. Relevant departments can also optimize environmental work through new media, such as the “12369 Environmental Reporting” WeChat public account—a national online reporting platform established by the Ministry of Environmental Protection that primarily accepts public reports on environmental pollution. This platform has been instrumental in gathering public feedback and encouraging citizen participation in environmental supervision.

3.1 Transformation from One-Way to Full Three-Dimensional Communication

According to the *2018 China Public Environmental Awareness Survey*, 81.5% of respondents reported having “heard of at least one environmental protection concept.” However, when asked about specific environmental concepts, only 10% could accurately articulate them. These findings indicate that while the public demonstrates relatively high awareness of and interest in environmental protection, inadequate communication efforts have resulted in numerous misconceptions. Although most people hold positive attitudes toward environmental protection, few possess specific environmental knowledge or know practical measures, making it difficult for the general public to actively participate in environmental protection actions.

This situation primarily stems from the imperfect communication mechanisms and suboptimal effects characteristic of the traditional media era. Traditional environmental communication involved three main actors: government environmental management agencies at various levels, media institutions represented by newspapers and periodicals, and various non-governmental environmental organizations. Communication channels primarily consisted of traditional media such as newspapers, television, and websites, supplemented by outdoor activities. This traditional approach represented point-to-face linear transmission with unidirectional information flow, limited reach, and minimal impact. On one hand, the “point” (transmitters) were limited in number and held dominant discourse power, controlling information flow and even public opinion, but this resulted in insufficient environmental information quantity and untimely updates. On the other hand, the “face” (audiences) could only passively receive information without adequately expressing their own opinions and ideas, preventing this mechanism from generating significant response.

Wired magazine defines new media as “communication from everyone to everyone.” In the new media era, every user can be a communication subject, audience member, or medium itself. In the internet age, tools like microblogs have greatly eliminated barriers to public expression, resolving institutional dilemmas of traditional media. Everyone becomes a “self-media” capable of freely expressing personal opinions. This is particularly true for environmental protection, an issue relevant to all. Every citizen possesses discourse power and the desire to express viewpoints, rather than merely passively receiving environmental information. New media has opened this channel for expression, allowing everyone to freely share their views on environmental protection in cyberspace. Consequently, environmental communication mechanisms have transformed from traditional one-way transmission to full three-dimensional communication.

3.2 Content Transformation from Professional to Popularized

In traditional media, information had to undergo cumbersome procedures before publication, requiring publishers to possess relatively high skills and professional

qualifications. This resulted in extremely specialized environmental communication content. For example, an environmental news story required interviewing, writing, editing, review, and other processes before release—an undoubtedly inefficient production model that consumed substantial time and material resources, leading to insufficient environmental information quantity. The high threshold also excluded ordinary people from environmental information production, relegating them to passive acceptance.

In the new media era, relying on mobile internet, the time cost and threshold for information production have been substantially reduced, with more convenient publishing channels enabling everyone to easily become an information publisher. A WeChat Moments post can be published simply by editing on a smartphone and clicking send. Using new media for environmental communication can significantly enhance public participation, not only bridging the gap between environmental information and audiences but also facilitating positive interaction between publishers and audiences, markedly strengthening communication effects while substantially reducing promotion costs. For instance, during the incident where the “tidal flat foraging craze” caused ecological damage at Bagua Beach in Tianjin’s Binhai New Area, relevant departments and volunteers released environmental information through short video platforms like Douyin. Through continuous viewing and sharing, the incident rapidly became a national focus, garnering widespread public support for coastal ecological protection, stimulating public environmental awareness, and mobilizing public supervision to successfully curb the foraging craze and protect the local ecological environment. This demonstrates that in the new era, new media is an indispensable tool for environmental communication that, when properly utilized, can rapidly awaken public environmental consciousness.

Through new media platforms, users can access environmental information of interest anytime and anywhere via mobile internet, staying informed about the latest environmental developments. When encountering excellent environmental campaigns, they can share them in their social circles, attracting more people to the environmental cause and strengthening environmental forces. For publishers, network and IT technologies enable rapid acquisition of audience feedback through comments, messages, and private messages, helping them understand communication trends, promptly adjust environmental information, and improve communication quality. It should be noted that during environmental communication processes, relevant departments must continuously monitor public opinion to avoid spreading false information and prevent unnecessary disturbances.

4.1 Enhancing Environmental Communication Capacity Through New Media

Since environmental information dissemination is non-profit in nature, it attracts limited investment, resulting in insufficient capital for long-term, large-scale promotion—issues that new media can effectively address. First, new media

can significantly increase communication speed and reduce information production costs. Through new media, environmental information can be disseminated efficiently and rapidly, promoting and transforming environmental achievements and facilitating effective exchange and transfer of environmental information resources. A single trending topic on Weibo's hot search list can reach hundreds of thousands of comments and shares within hours, achieving geometric growth in information transmission and comprehensive public coverage. Second, new media faces fewer restrictions and boasts numerous readers. For example, environmental advertisements sent via mobile SMS face minimal time and geographical constraints with simple publishing processes: after editing environmental information, immediate release is possible through sending or mass messaging functions—convenience difficult for traditional media to achieve. Additionally, mobile SMS messages are easily saved and forwarded, enabling environmental information recipients to become disseminators.

Meanwhile, building upon traditional media, new media can achieve resource integration to enhance environmental communication capacity. Traditional media possesses high-quality content resources and strong capital foundations. Integrating new media can enhance interactivity while leveraging traditional media's discourse advantages to further expand influence, such as by opening accounts on Weibo, WeChat public accounts, and Douyin. This enables timely understanding of public demands and trending issues while relying on inherent advantages to guide mainstream public opinion. Environmental protection departments can also utilize new media to promptly release environmental information and policies, actively communicate with the public, connect citizens with government, and harness public power for supervision and improvement, forming synergies for environmental protection.

Integrating environmental information deployment across various media will improve the disadvantages of traditional media in terms of communication scope and frequency. As is well known in communication studies, no single channel can reach 100% of target audiences, necessitating the broadening of communication channels for environmental communication. Currently, public media consumption has shifted from newspapers and television to mobile phones, computers, and other mobile electronic screens. If environmental communication can comprehensively integrate these channels, satisfactory communication effects will be achieved.

4.2 Guiding Broader Public Participation in Environmental Protection Through New Media

The characteristics of new media result in lower communication costs, stronger interactivity, broader public participation, and richer content, making environmental communication more convenient. For example, simply clicking on a public account or app allows instant, convenient access to environmental pollution indices and relevant administrative measures, as well as the ability to express opinions and suggestions for policy formulation. Once environmental

information is released, forwarding by opinion leaders with numerous followers can rapidly attract attention, which is then sustained by enthusiastic public engagement. In this process, the environmental audience expands beyond professionals to gradually encompass the general public. Better utilization of new media platforms enables widespread dissemination of environmental knowledge and policies, bringing environmental issues into public view and helping people exercise their legal rights to environmental information, expression, participation, and supervision. This influences environmental policy formulation and implementation, enabling comprehensive, multi-angle participation in environmental protection and advancing national environmental causes.

Similar to other fields, environmental communication is affected by regional economic imbalances. In economically underdeveloped areas, environmental issues are severely neglected, making the dissemination of environmental concepts and policies more challenging and urgent. Traditional media methods such as bus station billboards, bus electronic screens, and office building advertising displays are completely unsuitable for rural and backward regions. However, through new media and mobile internet, various environmental information can be conveniently, timely, and cost-effectively disseminated, enabling broader population participation in environmental causes.

New media can accelerate environmental information dissemination by leveraging audience psychology. According to Noelle-Neumann's "Spiral of Silence" theory, when expressing their ideas, audiences are influenced by their surroundings. If their views align with mainstream opinions, they actively participate, and the viewpoint spreads accordingly. Conversely, if their views differ from the majority, they remain silent to avoid isolation. In modern online society, everyone can quickly receive messages and express opinions, enabling issues to spread rapidly and achieve spiral growth. Therefore, in environmental communication, relying on new media such as the internet can facilitate rapid information dissemination.

4.3 Innovating Environmental Communication Through New Media

First, new media can innovate environmental communication content. Through platforms like WeChat and Douyin, increasing numbers of users can participate in publishing and creating environmental information, building interactive platforms for multi-party participation. This enables rapid, convenient transmission of environmental information, facilitates information sharing, and supports expression, consultation, mutual understanding, and consensus-building to promote and transform environmental achievements. Rational use of new media can overcome the shortcomings of traditional media—such as narrow material selection and lack of creativity—enabling entire communities to participate in environmental information creation and fostering innovation in environmental concepts and consciousness to collectively establish environmental protection and green development ideals.

Second, new media enables innovation in environmental communication forms. In the traditional media era, government environmental communication was limited to conventional media such as newspapers, television, bulletin boards, and banners, employing didactic methods and coercive tones that yielded poor results and failed to generate psychological resonance or value identification with environmental content. New media diversifies expression methods, enabling comprehensive use of video, audio, animation, and text to convey environmental concepts more effectively, providing audiences with multi-dimensional experiences and creating deeper impressions. Leveraging these characteristics expands communication channels beyond single pathways, broadens the scope of environmental communication, and increases public attention to environmental causes.

Furthermore, new media enables precise content targeting. For example, environmental public platforms can use WeChat's big data analytics to achieve precise weekly push notifications, while frequent updates increase user stickiness. The operational convenience of new media like WeChat and Weibo also facilitates innovation in communication forms, such as producing short videos to promote environmental protection.

China is currently in a stage of economic transition and development, shifting toward efficient resource allocation and intensive economic growth models, making environmental protection an urgent issue. Actively leveraging new media to meet the needs of contemporary society can achieve efficient environmental communication, promote innovative development in environmental dissemination, spread environmental concepts and policies, and pool social forces to collectively advance toward the "Beautiful China" goal.

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Note: Figure translations are in progress. See original paper for figures.

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