

**III PMMIS 2019**  
**Post mass media in the modern informational society**  
**"Journalistic text in a new technological environment:**  
**achievements and problems"**

**AMBIENT MEDIA IN THE MODERN INFORMATION SOCIETY**

Elena Grunt (a)\*, Ekaterina Golubkova (b)

\*Corresponding author

(a) Ural Federal University named after the first president of Russian Federation, Lenina av.51, Yekaterinburg,  
Russian Federation, rector@urfu.ru

(b) Ural Federal University named after the first president of Russian Federation, Lenina av.51, Yekaterinburg,  
Russian Federation, rector@urfu.ru

*Abstract*

Modern technologies such as the Internet, social networks, blogs, chat rooms, as well as technical means - mobile devices of pocket size, made it possible to make a revolution in the field of interpersonal and social interaction. Global sociocultural changes today have led to media inflation and traumatic social factors. Consequently, this is followed by the search of new adaptive processes of mastering social reality. Ambient Media is such an advertising communication that is unobtrusive and environmental. Regular everyday life objects are the communicational channels of this media which, we argue, may transform social environment. The technologization of a person's daily life, informatization, globalization processes form a new media subject, hourly exposed to media inflation. It is precisely the new communicative space that forms today a special media reality, which has a huge impact on the lifestyle of various social groups and individuals. The study has determined that Ambient media is a new non-traditional form of communication. This form is organically inscribed in the practices of everyday life and it has an empirical nature. Ambient media contributes to the formation of another media space in which the medium becomes a message. The study has revealed the main features of Ambient media.

© 2019 Published by Future Academy [www.FutureAcademy.org](http://www.FutureAcademy.org).UK

**Keywords:** New media, socio-cultural changes, social environment, Ambient.



## 1. Introduction

Modern media, both informational and advertising, in the conditions of the information society and the development of the electronic communications era, gains ever greater power and importance. They are able to transform not only the worldview and lifestyle of a person, but also social reality. Modern media is no longer limited to the media. Today, media can be attributed to any intermediaries in human communication with the social world such as power, law, love, art money and city (Luhmann, 2000). Therefore, an important task of the media is to search for that particular language of communication, which makes it possible to build effective communication in an altered socio-cultural space.

The search for new forms of media communication is caused not so much by the inefficiency of traditional forms, as by the formation of a new communicative space. The technologization of a person's daily life, computerization and globalization processes form a new media subject that is being subjected to media inflation every hour (Ahmed & Mandar, 2017). In today conditions the new communicative space forms a special media reality that has a huge impact on the lifestyle of various social groups and individuals, contributes to the expansion of social practices and the formation of a collective and individual identity of a person. The dynamically changing socio-cultural space expands the variability of the person's adaptation and confronts the need to search for their social niche, the niche where it is possible to create a daily space that is comfortable for a person. That is why non-traditional media strive to deliver advertising information in a changing environment as efficiently and unobtrusively as possible (Hutter & Hoffman, 2014).

Ambient media can be considered as an innovative form of mass communication, and as a media form of interaction with the environment. Ambient Media is a communication that offers qualitatively new patterns of influence and interaction with a person. Ambient (translated from the English. "Surrounding, covering, flowing") are advertising messages, unobtrusively embedded in the environment. Means of distributing messages are habitual consumer objects of everyday life such as bus rails, utility bills, trash can, pool bottom and starry sky etc. The term "media", as translated from the French "moyens d'information de masse" (Terin, 1999), means the impact in one direction, which is essentially authoritarian: from the source of information to the recipient, excluding the possibility of feedback and dialogue. The interactive characteristics of the Internet as a form of communication explain its property of non-traditional media. The means of mass communication, as derived from the English "media of mass communications" or "mass media" defines the interaction property. Due to the fact that the concept of unidirectional flow is not applicable to Ambient Media and due to its intrinsic characteristics, it is advisable to consider this type of communication in the terminology of the MCT (Mass Communication Tools).

## 2. Problem Statement

The processes of globalization, urbanization and media inflation can be considered as modern socio-cultural changes and they can have today not only positive, but also negative meanings. Oversaturation and redundancy of advertising information, according to Sztompka (1994), can be

considered as the negative consequences of such positive social changes as the information revolution, and the development of telecommunications. They violate the “established world of life” and they are traumatic. We talk about the “trauma caused by modernity; this is the most clearly manifested in the experience of the twentieth century and it was expressed in strengthening of fears and anxiety of the end of the XX century” (p. 475). Such changes also contribute to the sense of a person’s and society powerlessness in front of the incessant flow of messages, which results in an apathetic decrease in perception and interest; anxiety and restlessness; and lack of trust in traditional forms of advertising. The problem deals with the analyses of media new forms contributing to the search for a constructive scenario of overcoming traumatic social changes.

The inevitability of the search for innovative forms of advertising communications can be explained by the special properties of communication considered by Luhmann (2000). Mass media constantly increase the range of communication participants, due to which an overabundance of information appears, which, in turn, leads to uncertainty of communication success. In the heyday of technologization of the information society, the subject of the media is subjected to processes of significant media inflation, which motivate him\her to seek various psychological and social ways of protection from information, regarded as excessive and irrelevant. It leads to the fact that there is a lack of human interaction and media communication or it occurs at the formal level of information transfer, without affecting the value-motivational aspects.

Thus, one of the most important tasks in information society is the search for new media paradigms and other ways of media interaction with a person. It is necessary to agree with the opinion of Krämer, Neubaum, Hirt, Knitter, and Zeru (2017), that the ability of the media to engage people in socio-cultural practices due to personal motivation and mediated personal human experience is also of great importance.

The processes of globalization and technologization have led a person to other ways of communication. Modern technologies such as the Internet, social networks, blogs, chat rooms, as well as technical means - mobile devices of pocket size, made it possible to evoke a revolution in the field of interpersonal and social interaction. Communication becomes continuous and mediated, characterized by the term “ambient awareness” (Levordashka & Utz, 2016). A modern person stays online hourly, thus, the uninterrupted flow of information — both necessary and indirect (“for someone else”) —from virtual sources, forms the image of a real social system. The problematic field of the research is the adaptation of modern forms and methods to an altered social reality.

### **3. Research Questions**

In the conditions of dynamically changing communicative space, innovative forms of advertising communication require reflection and analysis. The main research objectives are to:

1. What are the socio-cultural conditionality of the emergence and functioning of innovative media in the context of globalization?
2. How can be classified traditional and non-traditional media?
3. What are the main features of Ambient media?

#### **4. Purpose of the Study**

Although the problems dealing with mass communication tools have already been studied rather extensively; however, to the best of our knowledge, Ambient media as a new form of post media remain to be revealed. Therefore, the purpose of the present work was to analyze this problem in detail. One of the key objectives of the study was to determine the main features of Ambient media as a new form of communication.

#### **5. Research Methods**

The methodological basis of the study is:

Functional approach and system analysis of social formations by Luhmann (2000)

The modern theories of communication worked out by such sociologists and philosophers as Shannon (1971), McLuhan (1994).

The theory of cognitive dissonance by Festinger (1957)

Theories of social change by Sztompka (1994), Roquet (2016), McCulloch (2015).

#### **6. Findings**

Information oversaturation and continuity, as the main characteristic of the information society, reproduce the uncertainty of communication success and the instability of the entire communication system (Luhmann, 2000). Confirmation of the Luhmann's theory are the modern scholars' results, which affect issues dealing with reducing the level of advertising communication perception. Sociological research conducted by the Swedish communication research team has shown that in the United States 160 billion dollars are spent on advertising. According to the calculations of researchers, thus, on average, 1 person has 1,500 contacts with advertising message daily (Dahlén, Modig & Rosengren, 2015). This explains the fact that the receiver of information in the heyday of the information society undergoes media inflation processes. It is unclear whether the message is accepted by the recipient or rejected. The solution of this problem, according to Luhmann, is the creation of a new type of media - "symbolically generalized communications". These media are based on the principle of binary coding - acceptance or rejection of information. They create a new motivation of the individual and contribute to the elimination of the threshold of non-recognition of communication.

Ambient media is a new non-traditional form of communication. This form is organically inscribed in the practices of everyday life and it has an empirical nature (Dalcher, 2016). These are advertising messages that are unobtrusively embedded in the environment, the distribution channels of which become habitual consumer objects of everyday life (bus rails, utility bills, trash can, pool bottom, starry sky). The concept of "selection offers" is one of the significant for the study of Ambient. Accepting or not accepting communication offers directs communication and depends on internally managed selection processes. A distinctive feature of Ambient media is the ability to freely select the recognition code of the advertising message. The resolution of the binary code will largely depend on the previous experience of the person and the correspondence of the message content to the internal attitudes, value orientations and interests, that is, the degree of the person's self-identification in the communication

message. We assume that identification processes actively form the category of “one’s own or that of others” in the consciousness of an individual, confirming the right to distinction. The processes of globalization, urbanization and information overload lead to the alienation of the environment, forcing the city dweller to search for his \her social niche. Ambient concept makes it easier for people to search. It also contributes to the expansion of variability of adaptation processes due to the free choice of a person (Roberts & Koliska, 2014).

In analyzing the Ambient media phenomenon, the communication theories of Luhmann (2000), Shannon (1971) , McLuhan (1994) and the cognitive dissonance theory of Festinger (1957) should be used, since they, on the one hand, expand the boundaries of the understanding of communication, and also allow to consider the properties and functions of Ambient media from in terms of sociological analysis, including the means of transmitting the message in the subject field of its analysis and attaching special importance to it.

The novelty and sharpness of the Ambient media perception is largely due to the formation of cognitive dissonance in the subject. The advertised object, firstly, is placed in an unexpected and unconventional place for him\her, which causes, according to the theory of cognitive dissonance of Festinger, to dissonant connections between attitudes and the perception of the individual. Secondly, the subject finds himself \ herself f in a situation of discrepancy between the expected sequence of cognitive elements (walking around the park, we see bushes) and what is really happening (the bush turns the female face into a magnificent female hairstyle at the center of her photo). Here, artificial cognitive dissonance is achieved by deliberately mismatched actions through the perception channel, as well as the mismatch of human stereotypes and reality. The theory of cognitive dissonance suggests that any dissonance leads to stress and tension, and, consequently, to an attempt to reduce the discomfort caused by searching for the causes that cause it. In the communicative aspect, this means that the dissonance caused by the Ambient media message will serve as an incentive to attract attention and encouragement to resolve the dissonance. The resolution will be the effective cognitive work of the subject in recognizing the signs and meanings of the message.

The concept of cognitive dissonance is answered by Guerilla marketing– one of the first non-traditional forms of advertising. The basis of communication, according to the guerrilla marketing guerrilla leader Levinson (2007), is a bright creative idea, designed to surprise and, thereby, attract the attention of potential consumers. Thus, the maximum effect of advertising is achieved with minimal economic costs. The original name of the method - Guerilla marketing (guerilla - translation from the French "partisans") is borrowed from military terminology: small partisan units cause significant damage due to their small number and stealth. The author sees the main difference from traditional advertising in “using creative thinking in conjunction with some very simple methods of promoting a product or a service” (p. 46). Meanwhile, the main characteristic of Guerilla marketing is a bright low-budget blow to perception; in turn, for Ambient media, contextual communication with the surrounding space is important. It allows to reconcile the person with an aggressive social reality of the present and promote safe and comfortable participation in communication.

A classic example of Ambient media is the “IBM Smart ideas for smarter cities” communication campaign. Shields were placed on the walls of city buildings, each of which was transformed into a

utilitarian environmental object: a visor from above — an area for shelter from rain at transport stops, a visor from below — a bench, another shield served as a convenient ramp for wheelchairs and pedestrians with luggage. Communication promise is to offer citizens to share their original ideas to improve the life of the city. On the billboards there is a link on the Internet, where the IBM brand collects “smart” ideas to make the city even better and even “smarter” (Shelton, Łukasz, Wojciechowski, & Warner, 2016).

Is it possible to limit this communication to the form of outdoor advertising? No, although it is located outside in a street environment (Shreshtha, 2014). This communication is inscribed in the urban socio-cultural space. Advertisements are the objects of everyday life, necessary, helping people, weeping in the rain, tired of the long waiting for transport, wanting to climb the stairs with heavy suitcases. Habitual urban environment itself becomes a message about the desire to make the life of the city and the people in it even better. Improving everyday life carries a life-affirming position, positive and innovation.

This is an example of how modern media are no longer limited to the traditional function of information transfer. In the modern communicative space, they offer individuals new social guidelines, dictate other rules of the game. New media are becoming a serious factor in sociocultural transformations, interpersonal communication, as well as ways of understanding themselves and social reality.

Ambient media is not only an unconventional means of communication, but it is a comfortable, self-modeled environment and social reality. Sociological concept of the environment represented by the works of modern scientists McCulloch (2015) and Roquet (2016). It becomes the answer to the transformation of the socio-cultural space of a person and is based on two basic principles: the social concept of individual survival in the socio-cultural space which constantly changing and aggressing. A new concept of a subject is based on the ideas of self-determination and personal responsibility (Roquet, 2016). Ambient communications construct more positive and less disruptive social relationships. They rely on the personal choice and self-identification of the subject, inviting him\ her to take an active part in building the social reality in which he \she would like to live and where he \she would feel comfortable, confident and protected. McCulloch (2015) also argues that any information that is naturally embedded in the environment, rather than imposed from outside, transforms the urban environment into a sustainable, safe, and comfortable for a person.

Ambient media is different from all other communication tools. Here, the means of transmitting the message, but not the content of the information, is decisive. Unlike traditional media, existing within easily recognizable forms of message delivery, such as TV, radio, print advertising, OOH (out of home), and electronic media, in the Ambient media channel communication becomes the medium itself. Firstly, the recipient receives information not through formal and external communication channels separated from him \her, but in places which are familiar to him\her where a recipient acts every day. The advertising message naturally dissolves in the environment of everyday life, without giving a physical possibility of its ignoring. Secondly, according to the Lasswell's (1948) and Shannon's (1971) communication theory, the communication channel plays the role of a transmitter and a message content provider, but in Ambient Media being the communication channel itself contains the content. The environment, in parallel with the context of the advertising message, becomes a stimulus for the stimulating activity of the recipient by transforming the external stimulus into an internal motive. It is the

location of the advertising message that encourages the recipient of information to recognize signs, symbols, and meanings embedded in the advertising context.

The novelty of Shannon's approach is due to the assumption of the existence of semantic noise on the way from the source to the transmitter. Semantic noises are associated with external factors, they affect the message, distorting it and destroying its integrity, thereby preventing it from being received and recognized. They can be caused by various factors such as semantic distortions, the physical state of the communication environment, psychological limitations of the recipient and sociocultural interference. Thus, semantic noises directly affect the recipient of the information and the process of his\her perception and understanding of the message. The concept of noise for the first time in the theory of communication put the question of the primary importance of the communication channel, that is, the environment of the physical and social space that form the situational context of communication. A special form of Ambient media allows us to reduce semantic noise that violates the integrity of the message. According to Shannon, redundancy of transmitted signals, that is, repeated repetition of a message, is capable of overcoming noises. The process of advertising communication in Ambient media allows the recipient to recognize information without repetition only with a single contact, which significantly increases the impact of the transmitted information. The development of the idea of flowing the content of a message into the medium of its transmission becomes the central idea of the communication concept of the Canadian philosopher McLuhan. The epoch of electronic communication is characterized by the shift of emphasis in the mass media from a message (message) to a communication channel or medium (medium). Also, the electronic era is characterized by the decentralization of communication processes. The emergence of new flexible, mobile forms of communication and the total acceleration of life creates the basis for a new advertising paradigm: the method of transmitting information becomes more important than the information itself. According to McLuhan (1994), "universal inclusiveness" in the information field returns to a person involvement in a community. The community changes its scale to the universal, and the possible speed of transmission and receipt of information eliminates the concepts of space and time and helps to overcome language, national and social barriers. McLuhan for the first time expands the boundaries of the communication tool concept, complementing it with things used by a person in his \her daily life. Hence, the author refers to the media items of clothing, accessories, cars and money. Ambient media is the form of advertising that allows you to put into practice the concept of McLuhann "media-is-the-message". The message is the medium itself. By extending this statement to the concept of Ambient media, we conclude that the environment is the media of the message content and the primary aspect of Ambient communications is the contextual coincidence of the content of the advertising message and the choice of means of transmission.

A distinctive feature of Ambient media, reinterpreting the concept of McLuhan's (1994) communication is the principle of "media-be-the-message", unlike the principle characteristic of traditional media "message-is-the-message" - "message is message". In Ambient media, the environment itself is the only message needed for it. To the best of our knowledge, it is necessary to propose a new approach to the classification of modern media. It seems appropriate, based on the concept of Ambient, to highlight among non-traditional media those that fit the times and fit meet the modern principle of Ambient.

Modern non-traditional media, in the opinion of Dahlén et al (2015), are in line with the principle presented by McLuhan “The Medium is the message” (the message transmission medium turns out to be content). Paraphrasing the author, Dahlén proposes a renewed principle: “media-be-the-message” - “the environment becomes a message”, that is, the environment surrounding the recipient of information is the only message necessary for him/her. Returning to the question of the actual classification of media, we can use the new principle of interaction between advertising and the consumer, proposed by Dahlén. It seems logical to offer the following classification:

Traditional media. These are media subordinate to a specific — expected — perception scheme by the recipients of the advertising message. This scheme is based on previous advertising experience. It helps the consumer to identify advertising, relying on knowledge of how advertising usually looks and where it appears. The consumer is aware of the appearance of ad units and messages. Thus, it is the media in which consumers are accustomed to being exposed to advertising (Stai, Kafetzoglou, Tsiropoulou, & Papavassiliou, 2018).

Non-traditional media (Ambient), unlike traditional ones, are identified by the consumer, firstly, as unusual and new to his \her advertising experience and different from the advertising schemes that are usual for him\her. That is, here consumers have not formed the habit of being exposed to advertising.

Secondly, according to Dahlen, non-traditional media (Ambient) “use the environment as a contextual signal for message delivery” (Dahlén et al., 2015, p. 23).

Therefore, for non-traditional media, the principle of media-be-the-message seems to be basic. Non-traditional media can follow this scheme, or they can ignore it, building their message around a creative message or low-budget forms. Thus, the classification of non-traditional media may look as follows:

Non-Ambient media – non- traditional media, in which consumers are not used to being exposed to advertising, on the one hand. On the other hand, the contextual correspondence between advertisement and the medium is not fundamental for them.

3. Ambient media – non-traditional media in which consumers are not used to being exposed to advertising. There is an exact contextual correspondence (coincidence) between the advertisement and the medium.

We believe that Ambient media is not only a self-sufficient communication tool, but it is also a tool that provides the basis for a whole type of media, called Ambient. It, as we defined earlier, refers to non-standard and non-traditional communication tools, as it consciously ignores and avoids traditional media.

The nature of Ambient media, with its inherent dynamism and merging with the environment, makes it very difficult to study with particularly quantitative methods. Ambient media is a multifaceted and multidimensional phenomenon. We have attempted to analyze the specific functions and characteristics of this form of communication, other than traditional media. It is worth to agree with Schäfer (2018) that it is possible to trace the expansion of the communication functions of Ambient media, which is natural and necessary for the information society.

Let us consider the main features of Ambient media. Communicative characteristics of Ambient media are as follows:



Unobtrusiveness: implicit way of communication; media adaptability to information consumer, as opposed to traditional “consumer adapts to media”;; invitation to complicity, the creation of a new experience; penetration into the practice of everyday life; interaction is useful and necessary for a person, but it is not an element of excess or luxury; uniqueness of each appeal, and impossibility of replication; high level of consumer’s concentration attention and level of customer’s involvement due to the impossibility of ignoring the environment.

Psychological aspects and emotionally saturated characteristics are as follows: high susceptibility to the content and method of posting; consumer’s basic emotion – surprise; high degree of consumer’s readiness for cognitive work on message processing and high degree of interest; predominance of consumer’s positive emotions and his\her contact with communication.

Psychological aspects and ethical characteristics are as follows: formation of a consumer's new sensitivity to the urban environment; creating a consumer's sense of respect for the brand;

Personal, subject-oriented aspect are as follows: the subject of communication is a personal experience oriented actor; self-identification of the subject through the content, meanings and symbols of the advertising appeal; personalized message effect.

Socio-cultural characteristics are as follows: contextual compatibility of advertising and the environment; modeling and the possibility of the social environment transformation; provoking environmental innovation;

overcoming the alienation of the urban environment; simulation of social experience based on typical practices of consumer’s everyday life;

constructing new social relations that are more positive and less destructive; formation of a new urban media space structure, where familiar objects of everyday life become carriers of information.

## **7. Conclusion**

The emergence of such an innovative form of advertising communication as Ambient media is a response to the request of the modern information society and the opportunity to establish effective communication to overcome the negative consequences of socio-cultural changes. Unlike other forms of non-standard communications, such as guerilla marketing, the basis of Ambient media is contextual communication with the environment. Acceptance or rejection of communication is a choice that a person makes independently and freely, regardless of external standards and social attitudes.

Ambient media contributes to the formation of another media space in which the medium becomes a message. Our research has shown that in Ambient communications, the question of the contextual coincidence of the content of an advertising message and the choice of a transmission medium seems to be of the highest priority. Only by identifying themselves through the content of the advertising message and the message medium, the person accepts the meanings and meanings of the transmitted information.

By making a choice of acceptance or rejection, a person not only determines his\her attitude towards it, but also enriches his\her social experience. Ambient Media can be considered as an innovative media form and a new sensory balance of a society (McLuhan, 1994) which set new attitudes, a new way of thinking, a new way of life and, ultimately, new forms of social organization.

The developed information society and the epoch dictate the inevitable expansion of the new media values such as their information, communication and social. Ambient media, therefore, reflects the trends of openness, consumer's free choice and his/her unity with the surrounding space and self-construction of social reality that is safe and comfortable for a consumer.

## References

- Ahmed, M., & Mandar., C. (2017). Ambient Noise in Warm Shallow Waters: A Communications Perspective. *IEEE communications magazine*, 55(6), 198-204. <https://dx.doi.org/10.1109/MCOM.2017.1500617>
- Dalcher, D. (2016). Time to rethink the social element of projects: Building on ambient awareness and social media. *PM World Journal*, 5(5), 1-5. Retrieved from: <https://pmworldlibrary.net/wp-content/uploads/2016/05/pmwj46-May2016-Dalcher-time-to-rethink-social-element-of-projects-Series-Article.pdf>.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford, CA: Stanford University Press.
- Hutter, K., & Hoffmann, S. (2014). Surprise, Surprise. Ambient Media as Promotion Tool for Retailers. *Journal of Retailing*, 90(1), 93-110. <http://dx.doi.org/10.1016/j.jretai.2013.08.001>
- Krämer, N. C., Neubaum, G., Hirt M., Knitter, C., & Zeru, S. (2017). "I see you, I know you, it feels good" – Qualitative and quantitative analyses of ambient awareness as a potential mediator of social networking sites usage and well-being. *Computers in Human Behavior*, 77, 77-85. <https://dx.doi.org/10.1016/j.chb.2017.08.024>
- Lasswell, H. D. (1948). The structure and function of communication in society. *The communication of ideas*, 37(1), 136-39.
- Levinson, K. (2007). *Guerrilla Marketing: Easy and Inexpensive Strategies for Making Big Profits from Your Small Business*. Mariner Books.
- Levordashka, A., & Utz, S. (2016). Ambient awareness: From random noise to digital closeness in online social networks. *Computers in Human Behavior*, 60, 147-154. <https://dx.doi.org/10.1016/j.chb.2016.02.037>
- Stai, E., Kafetzoglou, S, Tsiropoulou, E., & Papavassiliou, S. (2018, January). A holistic approach for personalization, relevance feedback & recommendation in enriched multimedia content. *Multimedia Tools and Applications*, 77(1), 283–326. <https://dx.doi.org/10.1007/s11042-012-1346-z>
- Luhmann, N. (2000). *The Reality of the Mass Media* (1st Ed.). Stanford University Press.
- McCulloch, M. (2015). *Ambient commons: attention in the age of embodied information*. The MIT Press.
- McLuhan, M. (1994). *Understanding Media: The Extensions of Man*. The MIT Press.
- Roberts, J., & Koliska, M. (2014). The effects of ambient media: What unplugging reveals about being plugged in. *First Monday*, 19, 84. <http://dx.doi.org/10.5210/fm.v19i8.5220>
- Roquet, P. (2016). *Emotion, Space and Society. Ambient Media: Japanese Atmospheres of the Self*. University of Minnesota Press, Minneapolis MN.
- Dahlén, M., Modig, E., & Rosengren, S. (2015). The value of ambient communication from a consumer perspective. *Journal of Marketing Communications*, 21, 20-32. <http://dx.doi.org/10.1080/13527266.2014.970825>
- Shannon, C. E. (1971). *The Mathematical Theory of Communication* (1st ed.). The University of Illinois Press.
- Schäfer, F. (2018). Ambient Media: Japanese Atmospheres of Self by Paul Roquet (review). *The Journal of Japanese Studies Society for Japanese Studies*, 44, 1, 121-125. <https://dx.doi.org/10.1353/jjs.2018.0005>
- Shelton, A. J., Łukasz, P., Wojciechowski, J., & Warner, J. (2016). Ambient marketing practices in the United States: a professional view. *Communication Today*, 7(1), 66-80. Retrieved from <https://www.communicationtoday.sk/download/12016/SHELTON-WOJCIECHOWSKI-WARNER-%25E2%2580%2593-CT-1-2016.pdf>

- Shreshtha, A. (2014, February 21). Can ambient media rain on transit media's parade? *Exchange 4 media*. Retrieved from: <https://www.exchange4media.com/out-of-home-news/can-ambient-media-rain-on-transit-media's-parade-54719.html>
- Sztompka, P. (1994). *The Sociology of Social Change*. Blackwell Pub.
- Terin, V. (1999). Massovyi kommunikatsii (Issledovanie opyta yf Zapade. [*Mass communication. (Study of the experience of the West)*]). Moscow: Institut Rossiiskoy Akademii nauk.