

# **THE REPUBLIC OF AZERBAIJAN**

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## **ABSTRACT**

of the dissertation for the degree of Doctor of Philosophy

### **FORMATION OF NEW MEDIA IN THE MEDIA SYSTEM OF AZERBAIJAN AND THE PROCESS OF CONVERGENCE**

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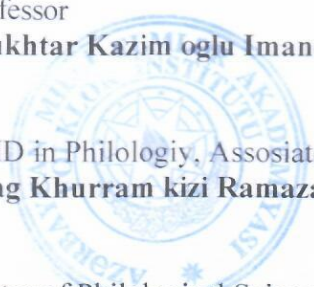
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## GENERAL CHARACTERISTICS OF THE DISSERTATION

**Actuality and development degree of the subject.** The revolution in information technology and globalization has brought powerful changes in the media system. The fourth information revolution and the intensive and rapid development of the internet, which is its foundation, caused the emergence of a new media in which modern information technologies and carriers were created in the mass communication system. With the global transformation of mass media, new forms of presentation of news configuration have been created, internet journalism has been included in the typological system of journalism. Media convergence has occurred as a result of the narrowing of the possibilities inherent in traditional journalism channels such as newspapers, radio and television, as well as the disappearance of the boundaries between mass media and mass communication tools. As access to information became easier, interpersonal and mass communication became easier. The integration of mass media into the mass communication system accelerated the socialization processes, and a new public sphere model emerged. Citizen journalism and mobile journalism have emerged as a result of the transition of the audience of the media from a passive state to a active state. Algorithmic news and drone journalism, created by the convergence of artificial intelligence and journalism, is a new phenomenon of modern journalism at this stage.

"New media is the most important feature and main driving force of the global information space and society, based on the possibilities of the Internet and bringing all previous forms of media under its wing".<sup>1</sup> Research work is very important in terms of the theoretical forms that create and present new media, new analysis of the concepts of time, space and truth, the formation of

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<sup>1</sup> Əliquliyev, R.M. İnternet fenomeninə çoxaspekli baxış / R.M.Əliquliyev, R.Ş.Mahmudov – Bakı: İnformasiya Texnologiyaları, – 2010. – 96 s.

communication tools and methods, and the discovery of unknown opportunities.

The transformation of Azerbaijan into the media communication system, its participation in the processes of globalization and integration, the organization and development of the Internet sector, the online media, the study of the problems of the media communication system, the identification and development of points of view Scientific and practical methods justify the relevance of the research.

It characterizes the relevance of the research to investigate the characteristics and quality of various convergent newsrooms in Azerbaijan, to examine the creative structure of such newsrooms that produce media products for different mass media, and to identify the concept of a universal journalist, to compare its conceptual nature and working mechanism with a traditional journalist.

On the other hand, the research focuses on the application of artificial intelligence technology to modern journalism. Problems such as the creation of algorithmic-robot journalism based on artificial intelligence in the modern media in Azerbaijan and the creation of software in this direction, its application on media issues and teaching scientific-theoretical research presented with news content determine the relevance of the thesis topic.

The formation and development process of the new media system in Azerbaijan, the features, functions and typology of the new media, media convergence, levels, legal and ethical aspects and perspectives of new journalism based on artificial intelligence have not been investigated as a special research topic until today. These factors determine the relevance of the research.

There are scientific-theoretical studies on this aspect of multispectral internet media in the global arena. Additional materials in the thesis factualize and complement the research. This is essential for the full coverage of the issues involved in the research. The first studies on new media belong to American and European scientists. Alvin Toffler and McLuhan emphasizes the globalization factor in the development of new media, Lev

Manovich successfully explains how structural features such as interfaces and databases carry this concept.<sup>2</sup>

Mark Poster, one of the first researchers of the new media age, touches on the capitalism of new media relations that started with the transformation of information media in capitalist countries at the end of the century in the book "II media age" published in 1995.<sup>3</sup> He calls this stage II media age. Manuel Castells emphasizes the versatility and interactivity of the new media age.<sup>4</sup>

American scientist Russel Newman, a well-known researcher of new media, is the author of media evolution theories of media technology and communication effects.<sup>5</sup>

Mark Deuze, professor of journalism and new media at the University of Amsterdam, conducted early studies on online journalism and multimedia journalism, Hubb Evers studied the ethical aspects of new media. Denis McQuail, an influential mass communication theorist, conducted important research in the field of media and mass communication theory and defined the concept of digital communication system.<sup>6</sup>

Michael Latzer and David Randall have clarified the concept of media convergence in their scientific studies, Vincent Filak and Jennifer Wilkinson have defined the principles of convergent journalism, Brant Houston has studied data journalism and Paul

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<sup>2</sup>Тоффлер, Э.Третья волна / Э.Тоффлер.–Москва: АСТ, –2004, 781 с.; McLuhan, M. Understanding Media / M.McLuhan.– Gingko Press; Critical edition,–2013. –402p.; Manovic, L. The Language of new media / L.Manovic. – Copenhagen: AarhusUniversityPress, – 2007. – 40 p.

<sup>3</sup>Poster, M. The seond media age / Poster, M. –Cambridge, Mass: Blackwell, – 1995. – 200 p.

<sup>4</sup>Castells, M. The Internet Galaxy. Reflections on the Internet, business and society / M.Castells M. – Oxford: [Oxford University Press](#), – 2001. – 292p.

<sup>5</sup>[Neuman](#), R. The Paradox of mass politics knowledge and opinion in the American electorate: [Electronic resource] / Harvard University Press. 241p.Cambridge,2020.–

URL:<http://www.hup.harvard.edu/catalog.php?isbn=9780674654600>

<sup>6</sup>McQuail, D. McQuail’s Mass Communication Theory.7th Edition London / D. McQuail’s. – New York: Sage Publications, – 2020, – 688 p.

Bradshaw has prepared the theoretical and practical foundations of mobile journalism.<sup>7</sup>

In recent years, the application of artificial intelligence in journalism has been a rapidly developing phenomenon in a very short time. Analysis of the relationship between journalism and AI in general has focused on a weak, narrow and restrictive view of the use of AI in many cases. As news production has been a research area so far, reviewing the role of the journalist in algorithmic journalism, personalizing the content, and incorporating artificial intelligence in journalism teaching has not yet been studied.

Christian Doerr, one of the early researchers of robot journalism, investigated the impact of artificial intelligence on journalism, while Spanish researcher Túniz López investigated the changes of algorithms in content and professional profile.<sup>8</sup> Nick Newman, a researcher at Oxford University's Reuters Institute for Journalism Studies, conducted a comparative analysis of news stories written by journalists and bots.<sup>9</sup>

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<sup>7</sup>Latzer, M. Convergence revisited: Toward a modified pattern of communications governance // *Convergence: The International Journal of Research Into New Media*, 2019. v. 15, No 4, –p. 411- 426.; Рэндалл, Д. Универсальный журналист / Д.Рэндалл, – Москва: Национальный Институт прессы,– 2000. – 120с.; Filak, V. / *Convergent Journalism: An Introduction: Writing and Producing Across Media* / V.Filak. –Routledge, –2019. – 206 p.; Wilkinson, J. *Principles of convergent journalism* /J.Wilkinson, Grant, D.Fisher. – London: Oxford University Press,–2012.– 320 p.; Houston, B. *Data for Journalists: A Practical Guide for Computer-Assisted Reporting* / B. Houston.– New York: Routledge,–2018. –252p.; [Paul, B.](#) *Mobile-First Journalism: Producing News for Social and Interactive Media* / B.Paul. –New York:Routledge, –2018. –240p.

<sup>8</sup>Dorr, K. *Ethical Challenges of Algorithmic Journalism* / K.Dörr, K. Hollnbuchner. //– London: *Digital Journalism*,–2017. 5(4), – p. 404-419.; Túniz-López, J. M. *From Data Journalism to Robotic Journalism: The Automation of News Processing. Journalistic Metamorphosis.* / J.M.Túniz-López, C.Toural-Bran, A.Fração-Nogueira // –*Studies in Big Data*, – Springer, – 2020, vol 70, – p.363-372

<sup>9</sup>Newman, N. *Journalism, media and technology: trends and predictions for 2020 (ES)* / –London: Reuters Institute for the Study of Journalism & Oxford University. Retrieved ,–2020. –40p.

Among the most recent work, Andreas Graffe explored algorithmic customization changes in communication flow theories, and Nicholas Diakopoulos explained perspectives of algorithmic journalism.<sup>10</sup> Bob Franklin explores concepts of drone journalism in the context of digital journalism and Flipp Chamberlains' new role and perspectives in journalism and news production.<sup>11</sup>

Various aspects of new media were included in the researches in the scientific-theoretical works of Russian scientists Alexander Kalmykov, Alexander Amzi, Gennadiy Bakuliev, Turkish scientists Filiz Aydoğan, Nurjan Torenli and Suat Gezgin.<sup>12</sup>

Although new media was not included in the research as a scientific research topic in Azerbaijan until this thesis, some aspects of internet media were researched and teaching materials were published in some publications and scientific articles. We can also mention the works of academics Rasim Aliguliyev, Zaur Babayev, Osman Gündüz and the "New Media" textbook published on the basis of a joint project of the Council of Europe and the European Union.<sup>13</sup>

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<sup>10</sup>Graefe A. Guide to Automated Journalism / A.Graefe.–New York: Columbia Journalism Review, –2016.– 48 p.; Diakopoulos, N. Automating the News / N.Diakopoulos.–London: Harvard University Press, – 2019. – 336 p.

<sup>11</sup>Franklin, B.Automated content. Digital Journalism Studies/ B. Franklin, L.Canter.– London: Routledge, – 2019. – 334p.; Chamberlain, P. Drones and Journalism / P.Chamberlain.–New York: Routledge, –2017. – 118p.

<sup>12</sup>Калмыков, А.А. Медиалогия интернета/ А.Калмыков. – Москва:URSS, – 2021.– 272 с.; Александр, А. Новостная интернет- журналистика / А.Александр. Москва:Аспект Пресс, –2012. – 230с.; Бакулев, Г.П. Массовая коммуникация. Западные теории и концепции / Г.П. Бакулев.–Москва: Аспект Пресс, 2016, –192 с.; Aydoğan, F. Yeni Medya Kuramları / F.Aydoğan.– İstanbul: Der Yayınları, –2019. – 345 s.; Törenli, N.Sosyal Medyanın Gazetecilikteki Rolü: Türkiye'deki Haber Kuruluşları Üzerine Bir İnceleme // – Gaziantep: Gaziantep University Journal of Social Sciences, – 2018. 17 (1), – s.135-148; Gezgin S.Yeni Medya Analizleri / S.Gezgin,A. İralı. Konya: Egitim yayın evi,– 2017,– 328c.

<sup>13</sup>Əliquliyev, R.M. İnternet medianının meydana gəlməsi və inkişafı: əsas istiqamətlər və xüsusiyyətlər / R.M.Əliquliyev, R.Ş.Mahmudov. – Bakı: İnformasiya texnologiyaları, – 2012. – 58 s.; Babayev, Z. Medianın əənəvi prinsipləri və internet-jurnalistika. Dərs vəsaiti. / Z. Babayev. – Bakı: “Tural-nəşr”, – 2018. –182 s.; Gündüz, O. M. Azərbaycan internet resursları, milli saytlar kataloqu / O.M.Gündüz. – Bakı: Multimedia mərkəzi, – 2010. – 416 s.

**Object and subject of the research.** The object of the study is the new media system of Azerbaijan. Its subject is analysis of theoretical and practical aspects of new media, media convergence process, transformation of Azerbaijani mass media to internet environment, formation, classification and development process of online journalism, convergence, application of artificial intelligence in contemporary journalism and point of view, determination of media levels.

**Purposes and responsibilities of the research.** The main purpose of the research is to examine the formation and convergence process of new media in the mass communication system of Azerbaijan, to show the theoretical and practical aspects of the development trends of internet media, to determine the perspectives of algorithmic journalism in Azerbaijani journalism, to examine the applications of artificial intelligence in drone journalism in our country.

To achieve the set goal, the following specific tasks were carried out:

- The formation process of new media in the information society has been researched; The new media has been examined in the context of both the mass media system and the mass media, the scientific explanation of the concept of the new media system has been made and the elements that make up this system in Azerbaijan have been analyzed;

- The forms and models of the new media were discovered, their types were determined, their characteristics, functions and perspectives were determined; The unique, typological and functional nature of Azerbaijani online journalism has been researched; functional-typological classification of social media has been determined;

- Transformation processes occurring in the structure, content, form and functions of the media and its economy - the non-linear, dialectical nature of globalization, convergence and diversification were analyzed, the formation factors and development trends of the media convergence system were examined. Azerbaijan was studied with the global transformation of the mass media, the working



mechanism of convergent editorial offices and the creative principles of a universal journalist were revealed;

- Journalism analyzed in the context of ICT development; Digital information: New forms of presentation of news configuration in the Azerbaijani internet environment were viewed, the content of the Azerbaijani internet media was analyzed and the fragmentation factor of the audience was determined;

- The working mechanism and broadcasting methods of internet television and radio in Azerbaijan were discovered, the effect of information communication technologies on the formation of mobile journalism was determined, citizen journalism and professional journalism were analyzed comparatively;

- The paradigm of artificial intelligence in modern journalism has been analyzed, the possible practical application areas and development prospects of artificial intelligence in the Azerbaijani media have been investigated, and the development trends of journalism based on artificial intelligence have been determined.

**Research methods.** Research on the formation and convergence of new media in Azerbaijan's mass media system is based on academic and applied research. During the research, general logical methods such as approach, synthesis, induction and deduction were used in the context of communication and mass communication theories, generalization, comparative analysis, historical-comparative analysis, statistical analysis, content analysis and other scientific research methods were discussed basically.

Systematization and classification methods were used during the study and analysis of the theoretical-methodological, functional typological aspects of the new media. During the research, observation, survey and interview methods were applied in Azerbaijani internet mass media and audience, activities of convergent editorial offices and journalism studies based on artificial intelligence.

**The main provisions of the defense.** The following provisions are defended in the research study:

- New media is the concept, most important feature and main driving force of the global information society;

- The continuous and dynamic development of the IV information revolution and the Internet as its basis, leads to the creation of new media, the global transformation of the mass media, the expansion of the typological journalism system and the formation of media convergence. ;

- The formation of new media in Azerbaijan is not only the result of information technology, but also related to the political, social and economic conditions in the country;

- The unique features and functions of new media transform information into a public product, enabling everyone to benefit as they wish. Consumers of information products also become its producers. The interaction between media and audience is changing, digital technologies are individualizing audiences.

- Transformation processes occurring in the structure and content of the media and its economy, including the form, genre and functions of journalism - globalization, convergence and diversification are not linear, they are dialectical.

- With the transformation in the media field in Azerbaijan, information, mass content and services are turning into commodity and market products. This strategic and tactical direction is not only the activity of the media, but also the social development of the world in the new civilization stage.

- Convergent journalism is not only a technological process, but also an analytical construct, such as new forms and genres, integrated production, multidisciplinary professionalism, multiplatform presentation and a specific configuration with an active audience.

- With the development of information communication technologies, individual communication surpasses interpersonal communication and becomes media platforms that provide mass communication, mobile media, news production and access to information.

- Citizen journalism, the content of which is created by the audience and the flow of information from many to many, fulfills the function of public control as one of the important indicators of information society and democracy.

- The impact of artificial intelligence on journalism, a new phenomenon in the media, is causing changes in companies, products, content and professional profile.

**Scientific novelty of the research.** The formation, development process and perspectives of the new media system in Azerbaijan as a scientific research object, media convergence and the new journalism paradigm based on artificial intelligence, which is the last stage, are included in scientific research for the first time. With this thesis, for the first time, Azerbaijani internet media including online journalism, social media forms, citizen journalism, internet television and radio have been extensively researched and systematized.

The thesis is distinguished by a complex research approach. In the study, the development of online media in Azerbaijan was analyzed in the general context of socio-economic development. For the first time in Azerbaijan science with a thesis:

-A scientific analysis of the concept of new media as a mass communication and information tool has been made, new media theories have been presented, different features, functions and typology of new media from traditional media have been determined; nature of communication behavior in new media, theories of communication models are proposed;

-Transformation of the media communication system - scientific-theoretical convergence, diversification, and demossification, the concept of clustering and convergence, artificial intelligence paradigm in journalism was examined, the formation of mobile journalism was investigated, citizen journalism and professional journalism were compared;

- The unified system and development of Azerbaijani online media is defined; the relations between the development of Azerbaijani online journalism and the national information policy are determined and the effect of modern information technologies on the development of new media is also shown;

- Transformation aspects of traditional mass media in Azerbaijan - digital, convergence, globalization, diversification, demossification and clustering were scientifically and theoretically

researched and systematized; Social-functional and spatial levels of convergence were added as a novelty to the work of world researchers; The convergence process, convergence levels, convergent journalism, convergent genres, data journalism and the principles of creating universal journalists in the media communication system of Azerbaijan were examined;

- The place of modern journalism in Azerbaijan in the context of information communication technologies and artificial intelligence was determined;

- Possibilities and problems that arise during the use of drone journalism in Azerbaijan are revealed and analyzed from the ethical and legal point of view in terms of journalism types; Possible practical application areas and development prospects of artificial intelligence were investigated in the Azerbaijani media.

**Theoretical and practical significance of the study.** Since new media, media convergence is a young field in Azerbaijan, and journalism based on artificial intelligence is a young field all over the world, any research in this direction has both scientific and practical importance. Although convergent journalism practically exists in Azerbaijan, this field has not been studied scientifically and theoretically and has not been applied in the journalism education system. In addition, the research study examining the scientific-theoretical concept of algorithmic journalism and drone journalism, the newest stage of media convergence, can be an important academic tool in Azerbaijan's experience of applying artificial intelligence in journalism. From this point of view, the scientific importance of the research is to expand the scope of “New media”, “Online journalism”, “Social media”, “Multimedia” courses taught in journalism faculties, new “Media convergence”, “Convergent journalism”, “Data journalism”, Algorithmic journalism. The creation of "drone journalism" courses can be evaluated by filling the gaps in this field in the theory of internet journalism, the addition of a master's degree as an elective course.

The practical significance of the study is explained by its usefulness for global media researchers in full and partial research of online media in Azerbaijan. At the same time, the thesis can be

used in the preparation of new education programs as well as related courses and seminars during the education process. The research work is useful to some extent in the context of understanding the relationship between current Azerbaijani society and politics and the media.

The research serves to enrich the professional pursuits of universal journalists by expanding their creative possibilities. It helps to establish the mechanism of action of convergent editorial offices. It shows the working principles of a universal journalist. It serves as a basis for the application of new hybrid multimedia types in knowledge production.

Analyzing the current situation in the international media and education fields, we come to the logical conclusion that, in fact, media convergence, artificial intelligence-based journalism is a leading factor in the development of an innovative educational model of modern journalism education. The application of technical methods in the education process of Azerbaijan can give more positive results. From this perspective, research is of great scientific importance.

As the phenomenon of artificial intelligence gains ground in the journalism profession and takes its place in academic research, universities face a great challenge in adapting their teaching to the radical changes it brings. From this point of view, research work is important in researching scientific-theoretical information about robot journalism, drone journalism and algorithmic news in the field of new media teaching in Azerbaijan.

**Approbation and application.** The content of the research is reflected in the articles published in scientific collections and journals of Azerbaijan and various foreign countries, and the reports read at international and national conferences. The results of the research can be used as an additional resource in higher education institutions.

**Name of the organization where the dissertation is carried out.** The dissertation work was performed at the Department of New Media and Communication Theory of Baku State University.

**Structure of the dissertation.** The thesis consists of an Introduction (20243), I chapter (100100), II chapter (90116), III chapter (100211), conclusion (10180) and bibliography with a total volume of (320850) characters.

## **THE MAIN CONTENT OF THE DISSERTATION**

In the **introductory** part of the thesis, the relevance of the subject and the degree of development are justified, the purpose and subject of the research, objectives and tasks, methods of the research, the defended provisions are specified, the content of the research is determined with scientific innovation, theoretical and practical importance. The name of the institution where the thesis is carried out, the building sections and information about the volume are also given.

In the first chapter of the thesis titled "**New media forms and models**", the concept of information society, its indicators and construction stages are examined. The basis and perspective of the activity of building a knowledge-based society in Azerbaijan are analyzed. The essence of the information revolutions that brought humanity to the information society, the manifestations they created and the reasons that gave birth to them are determined. The scientific explanation of the concept of the new media system in Azerbaijan is made and the factors shaping this system are analyzed. The typology and forms, specific features and functions of the new media are determined, and their development trends are predicted. The problems of new media and legal regulation issues are investigated.

In the first paragraph of this section titled "**Factors of the formation process of new media in the information society**", it is justified that new media is a conceptual model of the information society. The concept of information society, its ideology, futurological essence and conceptual foundations, indicators and construction stages are examined. The essence and development of activities to create an information society in Azerbaijan and the legislative basis are determined. The essence of the concept of new

media is explained, the formation factors of new media in Azerbaijan are determined.

The information revolutions that took place in the history of civilization are the basis of the path that leads humanity to the information society. IV. The information revolution and the intense and rapid development of the internet, which is its basis, and the paradigm of change are a factor that causes the emergence of new media in the mass communication system, the expansion and formation of the typological system of journalism. Our research on the formation of internet media in Azerbaijan proves that "Technical factor is not the only condition for the development of new media. This process must take place in the system of national media policy, media communication and new technologies"<sup>14</sup>. The formation process and development factors of new media should be explained primarily with the development of national cycles. On the other hand, in the process of globalization and media transformation, large-scale international companies are other important factors that accelerate the development of new media.

The concept of new media is a phenomenon, a public platform that defines all forms of information, production, sharing and communication with mass media, including all media. New media fifth generation mobile technology (5G) provides high-speed, broadband Internet access from portable computers to mobile phones. Today, new media, which offers a wider spectrum for receiving and broadcasting information, communication and interaction, manifests itself as virtual reality, augmented reality, artificial intelligence-based news configuration.

In the thesis, in addition to the existing theories of **mass criticism** and **social networking**,<sup>15</sup> theories of the **nature of communication behavior and communication models in new**

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<sup>14</sup>Məmmədova, L. Ənənəvi KİV ilə yeni medianın bəzi aspektləri //–Bakı: Bakı Universitetinin Xəbərləri. Humanitar elmlər seriyası, –2015, №4.–s.212-219.

<sup>15</sup>McQuail, D. McQuail's Mass Communication Theory. 7th Edition London / D. McQuail's. – New York: Sage Publications, – 2020, – 688 p.; Бакулев, Г.П. Массовая коммуникация. Западные теории и концепции / Г.П. Бакулев.– Москва: Аспект Пресс, 2016, –192 с.

**media** are proposed. The theories we propose are based on the goal of communication behavior, social participation and abundance of information in new media. It is based on the explanation of the different characteristics of the various means of communication, the wider information capacity of the new media vertically and horizontally.

The second paragraph, entitled "**Features, functions and perspectives of new media**", defines the typology and forms of new media. Similar and different features of new media and traditional media are analyzed. As a unique media tool that includes the possibilities of all traditional media, its unique features and functions have been researched, perspectives, problems and legal regulation issues have been determined.

The new media is fundamentally changing the traditional communication order, ushering in an entirely new era of communication. Internet media has an open, network-based, borderless, interactive and decentralized structure. Lev Manovich highlights three main features that distinguish new media from traditional media: "interaction, individual approach (demassification) and nonconformity"<sup>16</sup>. Above all, new media has the ability to bring together different, interactive environments. In this context, it is sometimes referred to as "multimedia"<sup>17</sup>. Digitization, multimedia, interaction, time and space limitlessness, online mode, decentralization, flexibility, usability, interoperability, individual approach, hypertext feature, no volume limitation, archiving possibility, versatility, anonymity, self-promotion, viewing possibility, relative convenience information retrieval, source of information, non-linear, asynchronous are specific features of new media.

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<sup>16</sup>Manovic, L. The Language of new media / L.Manovic. – Copenhagen: AarhusUniversityPress, – 2007. – 40 p.

<sup>17</sup> Deuze, M. What is multimedia journalism? // –Mechelen: Journalism Studies, – 2004. v.5, No 2, – p. 139-152.; Мультимедийная журналистика/ под общ.ред. А.Г. Качкаевой, С.А. Шюмовой,–Москва: Нац. исслед. ун-т Высшая школа экономики, –2017. –413с



In addition to the traditional functions of social control, participation and connection, new media have universal communication, value creation-regulation, control, democratization or democracy, commercial, self-presentation, memory, psychotherapeutic functions that are characteristic of social networks and blogs. Due to its transnational character, the new media is an extremely important tool and field for democratic participation at all levels, strengthening the foundations of civil society, and shaping a new worldview with political and civic projects.

The third paragraph is called "**Theoretical-methodological and functional typological aspects of social media**". In this paragraph, 4 methodological approaches are described for studying the nature of social media in the modern socio-cultural field - the form of social capital, network relations, the universal method, the general network method. The dimensions of social media and its functional-typological classification are investigated.

Social media, which emerged with the development of Web 2 technologies, confronts the world with a new communication revolution, qualitatively new virtual societies emerge, become a new form of public space and mobile-based communication takes shape. The public space created by the new media is a modern concept, a genre, a mixture of social groups, polemics, debates, judgments and experiences among unequal participants, which is a process of individualization (individuation) and secularization (worldliness) unlike the public space that Habermas characterizes.

The traditional concept of mass communication in the new media is combined with the concept of mass communication, and it becomes not only a journalistic activity, but also a public relations, promotion, marketing, public and private service, trade platform. All this and the development of information and communication technologies, the convergence of media with artificial intelligence creates modern forms and models of new media and expands its classification.

The characteristic of social media is that instead of a homogeneous society receiving the information provided by the

press, radio and television, it creates heterogeneous human communities that choose the information they receive, create and share the information, and include different interests and groups. This situation ensures the strengthening of thought, organization and participatory democracy in Azerbaijani society.

In the modern stage, due to the expansion of social media classification, "depending on the service provided (personal communication, business communication, blog), the form of information placement in the network (open, closed and mixed), regional characteristics (city, country, federal, international), audience characteristics, we propose a classification according to the content of the social media and its dominance in communication.<sup>18</sup>

The fourth paragraph is titled "**Examination of the distinctive, typological and functional nature of online journalism**". The role of economic, political and cultural factors in the transformation of journalism along with technological changes cannot be denied. New media creates new opportunities in terms of information efficiency and speed in journalism. Thus, it is published globally through new information and communication channels. These possibilities expand the functions of journalism.

New media is transforming journalism in four directions. First, the natural content of the news is changing as a result of what's going on. Second, the activities of journalists are changing digitally. Third, the news industry and the structure of newsrooms are undergoing a radical change. Fourth, a new mass media is being created.

According to our research in Azerbaijan online media, the genre of online journalism is polyphony, format, model, character, audience, purpose, profile, regional origin, uniqueness of content, professional and amateur, news and analysis, general and specialized, popular and elite, paid and public and we categorize them according to the directions. As part of the media system,

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<sup>18</sup>Мамедова, Л.О специфическим характеристикам новых медиа // – Пятигорск: Вестник Пятигорского государственного лингвистического университета. Научный журнал. – 2015. №3, – s.430 – 433

online journalism reflects the characteristics of mass communication. Its special abilities are based on certain characteristics of new media.

The second chapter of the dissertation titled "**Convergence as a development factor of new media**" examines the transformation and integration processes that occur in the global media communication system under the influence of the Internet phenomenon and ICT. The processes of massification, diversification, globalization and convergence in the structure, form, content and functions of the Azerbaijani media and economy, the factors and tendencies underlying these transformation processes are analyzed and the development trends are determined.

The first paragraph of the chapter is called "**The global transformation of the mass media: processes of diversification, demassification, globalization and convergence**". As in all fields of activity, the dynamic development and extensive application of ICT causes radical changes in the media. The transformation processes experienced reflect the globalization, convergence, diversification and massification of the field. Transformation processes in the field of media are observed at both macro and micro levels.

Communication technologies, computer and telecommunication networks developed in parallel with the phenomenon of globalization, which is one of the leading aspects of the transformation of modern media, have created a new communication environment that covers the world.

Demassification, another aspect of the global transformation of mass media, is the process of disappearance of mass displays in the media. Demassification is characterized by the transformation of the information flow and information structure, the dispersal of the mass audience and the fragmentation of the audience. The process of demassification is related to the diversification (diversity) of information and media, the increase in the number of existing information environments, channels and information sites in the new media environment, and the emergence of new media forms. Media holding is the gathering of media companies with different

content on a single platform. Another aspect of media transformation is curation-media reshaping.

"Media convergence is the disappearance of technical and regulatory boundaries between telecommunications, radio, TV broadcasting and other information sectors, as well as information technologies, artificial intelligence and media. This phenomenon is the result of the same content being presented in different forms (via text, audio, video) and through different communication channels (media, radio, television, internet, mobile devices). "Convergence is also an endless process in journalism that determines the emergence and combination of hybrid species."<sup>19</sup>

The second paragraph is called "**Levels of Media Convergence and Development Trends**". In the thesis scientific and applied research, the media convergence process in the Azerbaijan media communication system and among the components of the mass media has been analyzed and new development trends have been determined, based on the analysis of these trends. According to the two main features of convergence (synthetic, interactive), multimedia is considered a new type of information products: the expansion of the media space with non-journalistic information technologies, including PR, advertising, management tools; a combination of communicative practices, particularly journalism and public relations; coordination of information policy with the products of independent market producers, especially mass media companies and corporate industry, scientific and educational institutions.

The thesis summarizes the theoretical approaches and scientific-practical research carried out and describes various levels of convergence: technological, industrial, content and service, journalistic convergence. New and first levels of socio-functional and spatial convergence have been added to the research of world researchers. The integration of enterprises and organizations, government structures, as well as the private sector, advertising,

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<sup>19</sup>Məmmədova, L. Konvergensiya yeni medianın inkişaf faktoru kimi // Bakı: Dil və ədəbiyyat. Beynəlxalq elmi-nəzəri jurnal, – 2015.№2, –s.302-304

commercial companies and non-governmental organizations into the media-communication environment within the framework of the electronic state program, digital-electronic activity in the context of innovative communication characterizes social-functional convergence with society. Spatial convergence connects cross-border services and technologies, especially in the context of globalisation.

Examination of media convergence in Azerbaijan in different directions shows that convergence requires the development of a multiplatform broadcasting strategy. However, news quality is not always positive in production coordination and content distribution.

Convergence is a common feature of the modern information and communication society as a whole. *"In the future, this process can change not only the information and communication technologies system, but also various fields related to this system"*<sup>20</sup>

In the third paragraph, called **"Types of convergent journalism. Data journalism"**. It is argued that the convergence of different media platforms and configurations allows for the emergence of new types of journalism. So, multimedia streaming becomes possible with convergence. Major changes in journalism are characterized primarily as multi-profile, online and interactive.

Based on the scientific-theoretical literature and our practical research, we classify new media genres as hypertext, multimedia and synthetic genres. Multimedia genres are also divided into descriptive, audio and video types. Synthetic genres are more complex, where a combination of some elements (text, illustration, sound, interactive) is considered. Hypertext and multimedia genres are characteristic of Azerbaijani online media.

The latest convergent genre to emerge in the global media system is data journalism. According to the examples of journalism, the data in the Azerbaijani media appear in the form of statistical graphs. There is no open database in Azerbaijan, but some sources allow access to statistical data. These graphics are generally not the

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<sup>20</sup> Latzer, M. Convergence revisited: Toward a modified pattern of communications governance // Convergence: The International Journal of Research Into New Media, 2019. v. 15, No 4, –p. 411- 426.

products of journalists and media subjects, but are press releases prepared by administrations and organizations in the nature of data.

The last paragraph of second chapter is "**The working mechanism of convergent newsrooms and the creative principles of the universal journalist**". The transformation of existing media content, cross media formats; convergence of administrative issues in the editorial offices; changing working conditions in press centers due to convergence; response to multimedia needs; redesign of content; the effect of activity change on creativity was investigated.

The problem of transition to convergent editorials in Azerbaijan's mass media system is accompanied by a change in the traditional duties of journalists and editors in a fundamentally new structure. Although the vector change of mass media as a social and cultural institution in Azerbaijan is new, the process of universalization is remarkable. We can classify convergent newsrooms in Azerbaijan as multimedia integration and cross-media newsrooms. The concept of convergent journalism partially overlaps with the development of media convergence, although it has become relevant in practice.

The third chapter of the thesis is called "**Journalism in the context of the development of information communication technologies and artificial intelligence**". In the context of information society, the internet is being reshaped with the influence of mass media, information technologies and artificial intelligence. Third chapter examines these paradigm shifts in journalism with the development of IT and the EU. New forms of news structuring in Azerbaijan's media communication system, activities of internet television and radio, and features of mobile journalism are examined. The distinctive, functional nature of citizen journalism is determined by comparison with traditional journalism. The application of artificial intelligence in modern journalism, drone journalism, features of algorithmic news, legal and ethical aspects are analyzed and perspectives are shown. The opportunities, challenges and limitations of drone journalism and the applications of drone news production, distribution and

consumption are explored. On the other hand, the development opportunities of the country in terms of journalism types and the effects of these opportunities are examined ethically and legally, and the perspective and development trends of artificial intelligence-based journalism in our country are determined.

The first paragraph of the third chapter is titled "**Digital information: New presentation forms of news structuring on the Internet**". With the development of information and communication technologies, new forms of presentation of communicative news configuration have emerged in the internet environment. In the digital information age, official portals of government departments, businesses and organizations have functioned as new forms of news configuration in the media. In addition to the transformation of the press into a new media environment, internet newspapers, information agencies and news sites offer new opportunities to their readers such as breaking news, getting to know the materials of online newspaper archives, and interactive communication between users and newspapers.

New journalism has a dynamic structure that breaks the traditional rules of knowledge production. "*Combining the World Wide Web, hypertext, multimedia and global computer networks, ushered in a new era in publishing.*"<sup>21</sup> With the development of Web 2.0 technologies, users also become active producers and create the content of information sites. This process can be described as the concept of cultural citizenship. The biggest function of internet newspapers and information sites and the biggest difference from print media is that they provide instant information and their functionality. Along with newspapers, magazines are also turning into a new media medium. The use and storage of information provided in electronic media in digital, optical and magnetic media supports the transfer of historical records to electronic media.

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<sup>21</sup> Dick, M. Interactive infographics and news values // – London: Digital Journalism, – 2014. v.2, No 4, –p. 490–506.

During the analysis of the online media outlets in Azerbaijan, it is revealed that most of the official media outlets in the country do not use the possibilities of the Internet sufficiently, do not take advantage of the unique features such as multimedia, the absence of volume restrictions. The content of information sites is dominated by politics, economy, show business, sports, crime, social-domestic daily news. Materials such as analytical analysis and journalistic research are rare.

In the second paragraph of the third chapter titled "**Internet television and radio's operating mechanism and broadcasting methods**", the design, development features, new types and broadcasting methods of television in the information society are defined, its formation, functioning mechanism, the status and expectations of legal Internet television and radio in Azerbaijan are investigated.

Although problems such as Internet TV provider problem and licensing of IPTV broadcasting platforms are on the agenda in Azerbaijan, the number of independent Internet TVs is increasing. During the research, we investigated the structure and operating mechanism of internet televisions in Azerbaijan, and revealed a number of advantages of online televisions that differ from other analogues: tape broadcasting; live broadcast; free publication; desk clock; digital archive, mobility; questions and comments; various options for purchasing and viewing video content, unlimited options; control of the content by the authors.

The advantage of Internet radio is its spatial breadth. Language, geographic distribution and channel restrictions have been removed for listeners with wide format capability. The results show that the economic strength of Azerbaijan's internet radio broadcasting industry may have little effect. Ownership density of internet radio, factors that hinder its transmission capability, problems in determining its location in the radio system. Internet radio is a new source of competition in the traditional broadcasting environment as a result of increasing diversity.

The third paragraph of the third chapter is called "**The effect of information communication technologies on the formation of**



**mobile journalism"**. The rapid development of modern ICT, including mobile technologies, plays a decisive role in all spheres of society. In this paragraph, the basic dynamics of mobile news production, the positive and problematic areas that mobile technologies have brought to the journalism profession, the intensity and habits of mobile phone usage in news consumption, the participation, role and perspectives of mobile journalism are examined.

One of the main points to be considered in research studies is the professional use of mobile technologies in the profession of journalism, the role and function of mobile phones in news production. On the other hand, not only professional journalists but also ordinary citizens become news producers thanks to their mobile phones. The discovery of the importance of mobile journalism indicates that in the future mobile phones will not only be a transmitter of information but also an operational mass media. Considering all these, we see the inclusion of mobile journalism as a subject in training programs as an important step in the future of journalism.

The fourth paragraph of the third chapter is titled "**The Artificial Intelligence Paradigm in Journalism: Drone Journalism, Algorithmic or Robot Journalism**". Summary Artificial intelligence (AI) technology is one of the most promising innovations with great potential. As a result of the convergence of information technologies and journalism, artificial intelligence is transferred to the news production process, the structure and functioning of the media.

Expressed in different terms by researchers, algorithmic journalism is an emerging reality that has not been studied yet. In automated journalism, also known as algorithmic journalism or robotic journalism, news is produced automatically by computers using artificial intelligence (AI) software.

Currently, IT companies that offer artificial intelligence software such as Data Science and Automated Insights, Narrative Science, United Robots, Yseop, Arria and Monok develop journalism algorithms and provide them to news agencies. "*News*

*providers such as the Associated Press, Forbes, ProPublica, and the Los Angeles Times were the first media outlets to implement AI software."* <sup>22</sup> In our country, there is no algorithmic processing of news on information sites and there is no annotation informing the consumer that is actually facing a machine.

We can gather the journalistic capabilities of drones under four headings: facilitating and enhancing the information gathering experience; strengthen information content and information delivery; providing new channels for alternative media and journalism practices, economic opportunities, limits and concerns of drone use. Problems that arise during the use of drones in journalism fall into 4 categories: protection of privacy; protection of public safety and health; context change in news; sharing and security of acquired information.

In our country, the drone application at the level of professional journalism was carried out for the first time in Azerbaijan Television (AzTV). The program from Kurdamir, which was broadcast in the News program in 2020, is the first example of drone journalism in Azerbaijan. Currently, drones are actively used in the media sector of our country in the shooting of news, documentaries, promotion and social media, mass events and concert programs.

In the fifth paragraph of the third chapter of the thesis titled **"Comparison of citizen journalism and professional journalism"**, the nature, advantages and development trends of citizen journalism are examined using the comparative analysis method.

The basic philosophy of citizen journalism is based on the expansion of the concept of journalism and the participation of ordinary citizens who are not professional journalists in journalism in order to produce news, enter the public communication environment and protect their citizenship rights.

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<sup>22</sup> Diakopoulos, N. Automating the News / N.Diakopoulos.–London: Harvard University Press, – 2019. – 336 p.

Civil journalism refers to professional journalism, citizen journalism, non-professional journalists, writers active in social networks, microblogs, blogs. The main difference is the change in traditional approaches to the typology of journalism as a factor that has emerged in recent years and to itself as a social institution.

The biggest criticism of citizen journalism is the violation of ethical rules. Contrary to professional journalism, cases of violation of ethical norms such as disinformation, dissemination of news without information and privacy are the problems of citizen journalism.

Citizen journalism in our country shows itself mostly in the form of social statuses, blogs and content of internet channels. Citizen journalism in the information and communication environment of Azerbaijan is superior in meeting the information needs of the audience. We believe that the essential feature of citizen journalism is to encourage direction in journalism, public participation and the development of citizen activism. Citizen journalism fulfills the function of public control as one of the important principles of information society and democracy.

Summarizing our theoretical ideas, different approaches, scientific and practical research, we come to the following conclusion in the context of citizen and traditional journalism comparison.

“In traditional journalism: Content is created by selected professionals; People remain passive consumers; Information flows from one point to many points; It has an autocratic nature; The speed of presentation of information is equal to space and time; A journalist prepares a report after the incident.

In citizen journalism: Content is created by the audience; Users are authorized; Information flows from many points to many points; It has a democratic structure; Information is faster and more efficient, without limitations of space and time; A citizen journalist is an observer of the event.”<sup>23</sup>

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<sup>23</sup>Mammadova, L. Peculiarities and methods of citizen journalism, Advertising and public relations: traditions and innovations // Works of the 8-th International Scientific and Practical Conference, – Moskva, – 2020. – s.193-198.

In the "**Conclusion**" section of the thesis, the results of the research on the subject are summarized, the theoretical ideas and the practical ideas that have been put forward are shown. The following conclusion is reached by summarizing various concepts, scientific-theoretical ideas, different approaches and various research methods in new media research in Azerbaijan:

-New media is the concept, most important feature and main driving force of the global information society. The fourth information revolution and the Internet, which forms its basis, are the main factors in the formation process of new media. Azerbaijan experience shows that technical factor is not the only condition in the formation process of new media. The formation and development of new media takes place in the system of national media policy, media communication and new technologies.

- Problems such as the use of false identities and files in the new media, misinformation without reference, false, provocative and biased content appear as negative aspects. The anonymity makes it difficult to identify in new media. This leads to distrust of news or information sources. Excessive addiction to virtual life, immersion, internet addiction dangers of users are the problems of new media.

- New media, unlike traditional media, is a democratic and free field of thought, it ensures the continuous and free participation of the audience in the media. With its interaction feature and multi-layered structure, it creates a new model of public space by allowing individuals to discuss socio-political processes and become participants.

- Internet information resources in Azerbaijan are mainly established by media organizations and commercial structures. Public organizations and authorities are very poorly represented as online media creators.

- The convergence process observed in Azerbaijani internet journalism eliminates not only the borders between mass media, but also the distance between the audience and the producer.

- The convergence process determines the formation of a single technological and economic space, provides the unification of

communication services and information products on a single platform. The media convergence process covers all areas of journalism, from the convergence of media companies to the synthesis of media content delivery formats.

- The economic strength of the internet radio broadcasting industry in Azerbaijan is not that great. Ownership density of Internet radio, factors that hinder its transmission feature, and determining its place in the radio system are the factors that create problems. Although the problem of internet TV providers and licensing problems of IPTV broadcasting platforms are on the agenda in Azerbaijan, the number of independent Internet TVs is increasing.

- Individual communication turns into mass communication with the development of communication technologies. Mobile environments are becoming media platforms that transcend interpersonal communication and provide access to news and information.

- Citizen journalism is formed as a result of the development of ICT, the internet and mobile technologies being accessible to everyone, and this situation seriously affects the monopolistic position of traditional mass media.

- Interactions between journalists and robots will increase, as the application of AI to various journalism applications expands and evolves. Artificial intelligence can help and replace journalists, but no automated software can replace a good journalist. It seems impossible to talk about useful and effective drone journalism without ethical rules for both private and corporate drone use and reasonable legal arrangements between safety and freedoms.

**The main theses of the dissertation are reflected in the following articles and reports at the scientific conferences:**

1. The role of the new media in the formation of the political landscape of the world // – Baku: Language and literature. International scientific-theoretical journal, 2017. - No. 1, - pp. 346-349
2. An alternative to traditional television: Internet TV// – Baku: Philology issues, – 2012. No. 6, – p. 430 – 433.
3. Traditional mass media and some aspects of new media //–Baku: News of Baku University. Humanities series, -2015, No. 4. - p. 212-219.
4. Internet possibilities of journalism //–Baku: Language and literature (international scientific-theoretical journal), –2012.№2, –p.302-309.
5. Convergence as a development factor of new media // Baku: Language and literature. International scientific-theoretical journal, - 2015. No. 2, - p. 302-304
6. Media in the context of ICT development // "Problems of information security" 1st Republican scientific-practical conference, Baku: Institute of Information Technologies of the Azerbaijan National Academy of Sciences, 2013, p. 44- 45.
7. New media as a factor creating a new model of the public sphere // – Baku: Information society problems. Scientific and practical journal, - 2014. No. 2, - p. 31-39.
8. Conceptual characteristics of new media // Materials of XX Republican scientific conference of doctoral students and young researchers. Volume II, - Baku: "Azerbaijan State Oil and Industry University" publishing house, -2016, No.3, -p.86-88.
9. On specific characteristics of new media // – Pyatigorsk: Vestnik of Pyatigorsk State Linguistic University. Scientific journal. – 2015. No. 3, – p. 430 – 433.
10. Peculiarities and methods of citizen journalism, Advertising and public relations: traditions and innovations // Works of the 8th International Scientific and Practical Conference, - Moscow, - 2020. - p.193-198.

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