

THE IMPACT OF DIGITAL INTERACTION ON THE TRANSFORMATIONS OF SOCIO-ECONOMIC AND EDUCATIONAL PROCESSES IN RUSSIAN SOCIETY

O IMPACTO DA INTERAÇÃO DIGITAL NAS TRANSFORMAÇÕES DOS PROCESSOS SOCIOECONÔMICOS E EDUCACIONAIS NA SOCIEDADE RUSSA

EL IMPACTO DE LA INTERACCIÓN DIGITAL EN LAS TRANSFORMACIONES DE LOS PROCESOS SOCIOECONÓMICOS Y EDUCATIVOS EN LA SOCIEDAD RUSA

Margarita VDOVINA¹
Mihail FIRSOV²
Yanina SHIMANOVSKAYA³
Anna CHERNIKOVA⁴
Dmitry SAVCHENKO⁵

ABSTRACT: In contemporary Russian society, the development of digitalization is tied with the battle against the detrimental effects of COVID-19. In the face of the spread of the infection transmitted primarily through direct human interaction, the need to change the format of this interaction to digital has risen. The dynamics of digitalization were boosted, leading to several problems. There surfaced the issues of technical difficulties, the lack of digital literacy on the part of individual staff members in organizations and some social groups and individuals (primarily those in the socially vulnerable population groups), the limitations of direct interpersonal interaction, the redundancy of digital information, emotional fatigue from having to work and learn only remotely, the cybersecurity of online interactions, a significant increase in digital control over citizens' lives, the risks of social and psychological tension and distrust of digitalization, technophobia, inability to rationally apply the successes of scientific and technological advancement to improve personal and social well-being.

KEYWORDS: Modern society. Digitalization. COVID-19 pandemic. Forced digitalization. Digitalization in Russia. Problems and risks. Development of digital interaction.

RESUMO: Na sociedade russa contemporânea, o desenvolvimento da digitalização está vinculado à batalha contra os efeitos prejudiciais do COVID-19. Diante da disseminação da infecção transmitida principalmente por meio da interação humana direta, surgiu a necessidade de mudar o formato dessa interação para o digital. A dinâmica da digitalização

¹ Russian State Social University, Moscow – Russia. Doctor of Sociological Sciences, Professor. ORCID: <https://orcid.org/0000-0002-8617-2940>. E-mail: antigon1922@yandex.ru

² Russian State Social University, Moscow – Russia. Doctor of Pedagogical Sciences, Professor. ORCID: <https://orcid.org/0000-0003-0665-5852>. E-mail: mihail_firsov@mail.ru

³ Russian State Social University, Moscow – Russia. Candidate of Sociological Sciences, Professor. ORCID: <https://orcid.org/0000-0003-0282-1323>. E-mail: ya1873@yandex.ru

⁴ Institute for Demographic Research – Branch of the Federal Center of Theoretical and Applied Sociology of the Russian Academy of Sciences, Moscow – Russia. Junior Researcher. ORCID: <https://orcid.org/0000-0002-8125-7566>. E-mail: aanny@yandex.ru

⁵ Russian State Social University, Moscow – Russia. Candidate of Psychological Sciences, Professor. ORCID: <https://orcid.org/0000-0003-3023-9111>. E-mail: d.v.savchenko@bk.ru

foi potencializada, gerando diversos problemas. Surgiram as questões de dificuldades técnicas, a falta de alfabetização digital por parte dos funcionários individuais em organizações e alguns grupos sociais e indivíduos (principalmente aqueles em grupos populacionais socialmente vulneráveis), as limitações da interação interpessoal direta, a redundância da informação digital, fadiga emocional por ter que trabalhar e aprender apenas remotamente, a cibersegurança das interações online, um aumento significativo do controle digital sobre a vida dos cidadãos, os riscos de tensão social e psicológica e a desconfiança da digitalização, tecnofobia, incapacidade de aplicar racionalmente os sucessos do avanço científico e tecnológico para melhorar o bem-estar pessoal e social.

PALAVRAS-CHAVE: *Sociedade moderna. Digitalização. Pandemia COVID-19. Digitalização forçada. Digitalização na Rússia. Problemas e riscos. Desenvolvimento da interação digital.*

RESUMEN: *En la sociedad rusa contemporánea, el desarrollo de la digitalización está ligado a la batalla contra los efectos perjudiciales del COVID-19. Ante la propagación de la infección transmitida principalmente a través de la interacción humana directa, ha surgido la necesidad de cambiar el formato de esta interacción a digital. Se impulsó la dinámica de la digitalización, lo que generó varios problemas. Surgieron los problemas de las dificultades técnicas, la falta de alfabetización digital por parte de los miembros individuales del personal en las organizaciones y algunos grupos sociales e individuos (principalmente aquellos en los grupos de población socialmente vulnerables), las limitaciones de la interacción interpersonal directa, la redundancia de la información digital, fatiga emocional por tener que trabajar y aprender solo de forma remota, la ciberseguridad de las interacciones en línea, un aumento significativo del control digital sobre la vida de los ciudadanos, los riesgos de tensión social y psicológica y desconfianza hacia la digitalización, tecnofobia, incapacidad para aplicar racionalmente los éxitos del avance científico y tecnológico para mejorar el bienestar personal y social.*

PALABRAS CLAVE: *Sociedad moderna. Digitalización. Pandemia de COVID-19. Digitalización forzada. Digitalización en Rusia. Problemas y riesgos. Desarrollo de la interacción digital.*

Introduction

Since the end of 2019, modern society has been undergoing increasingly pronounced transformations caused by the COVID-19 coronavirus infection, which is novel to mankind and whose spread quickly reached a global scale.

COVID-19 is a potentially severe acute respiratory infection caused by the SARS-CoV-2 virus (WORLD HEALTH ORGANIZATION, 2021) with the risk of fatality. This infection is transmitted primarily through direct human interaction. To reduce the incidence of the disease, authorities in various countries, including Russia, have implemented unprecedented measures to limit such interaction. Digital technologies have become one of the main means of interaction for many people.

Digitalization refers to the global introduction of digital technology into various spheres of life. It is a global process caused by the dynamic development of information technology, microelectronics, and communications in most countries of the world. The basis for the development of digitalization in modern society is the Internet, data transfer to which is carried out via various gadgets (GENERALNYI DIRECTOR, 2021).

The process of digitalization has a fairly rapid pace, yet the COVID-19 pandemic has boosted even further, that is, made it more accelerated, requiring special effort and more intense work on its implementation.

Since May 2020, many employees of Russian organizations have been transferred to remote work.

The rate and scale of digitalization rose sharply due to the need to provide remote access. Schools and universities transitioned to the online form of classes. However, the readiness of regular citizens and specialists, as well as technology and software, turned out to be insufficient for such drastic measures. The inadequate equipment of organizations and households with the necessary technology, malfunctions in its operation, insufficient digital literacy of the population, and the still low digital skills of some employees, haste, and lack of the necessary experience in solving organizational problems have formed many obstacles to the stable development of digital interaction.

In the current circumstances, emphasis is put on the importance of innovative solutions and the ethics of monitoring people's contacts to reduce the risk of infection by the novel coronavirus. Nevertheless, about six months after the appearance of the first COVID-19 warning apps for smartphones built on Apple and Google's privacy-preserving platforms, they remain in short supply. Less than half of U.S. states offer Android and iOS tools for the "exposure notification" system announced in April 2020. These tools assess the proximity of other users via anonymous Bluetooth beacons sent from phones with the same software. However, most people in participating states have not yet activated these apps (PEGORARO, 2021).

The reinforced development of online interaction has its successes and issues. Undoubtedly, the pandemic has served as a major impetus for the acceleration of the digitalization of all life spheres. However, such an abrupt and spasmodic nature of universal forced digitalization has disrupted the continuity of its development and does not yet allow it to acquire a sound position with reliable material and technical and organizational and qualification foundation. In such circumstances, it is important to identify and comprehend various aspects of the digital transformation of social interaction.

Study Goals and Objectives

The purpose of this paper is to study the problems of the development of digital interaction in contemporary Russian society based on a review of domestic and foreign sources, as well as some empirical data.

The research objectives are to reveal the possible positive changes in human interaction resulting from digitalization, to identify the ambiguous and rather problematic aspects of its development, and to determine the theoretical and methodological approaches that can be used for their analysis and comprehension.

Methods

The main research methods employed in the study include complex quantitative and qualitative analysis, sociological survey, observation, and analysis of official documents. The information base is constituted by international and Russian scientific publications and documents and the results of an express survey conducted in late 2020 – early 2021.

The questionnaire survey collected data on the first results of the difficult year 2020 as viewed by Russian citizens. The respondents were asked to take an online survey consisting of 15 questions characterizing the year 2020 and the impact of the coronavirus pandemic and the development of digital interaction on everyday life.

The total sample of the survey is 187 respondents. Of these, 75.4% are women and 24.6% are men. The sample was formed by the “snowball” method with the surveyed respondent being asked to survey their friends and acquaintances who were online at the time of the survey (given the self-isolation mode in effect at the time).

11.2% of the survey respondents are underage, 52.4% belong to the population group between 18 and 30 years old, 14.4% of the respondents are aged 31 to 50, 7.0% are between 51 and 70 years old, and 0.5% are older than 70. A part of the respondents did not provide their age.

Out of 187 respondents, 29.4% are married, 55.6% are not married, 10.7% are in a “common-law” marriage, 2.7% are divorced, and 2.1% are widowed. Over half of the respondents (67.4%) have no children.

34.8% of the respondents have a higher education, 28.9% indicate incomplete higher education. This number includes those who dropped out and those who are currently receiving higher education. 34.2% have a secondary education. 31.6% of respondents report being

unemployed. A certain number of the respondents chose not to indicate their work experience, more than 16.0% of the respondents have no work experience.

Results

In their answers to the question “What significant changes occurred in your life in 2020?”, 65.8% of the respondents note positive changes, 15.0% describe negative changes, and 14.0% answer “none”. 5.2% give various other options: some answered “I survived”, young people wrote “graduation”, “entering a higher education institution”, etc.

A major part of the respondents (out of those who note positive changes) notice progress in all social spheres, have discovered the virtual space, and became familiar with all its possibilities, such as getting another education online, taking remote virtual courses of advanced training. Aside from that, many respondents note such advantages of distance learning in the pandemic as saving personal time they used to spend on the road, quick feedback, and time-efficiency in the performance of assigned tasks. Those who did not know how to use a computer also experienced positive emotions, as the majority of such respondents could not find the “right time” to master information technology but, during the pandemic, discovered many free webinars and courses offering all participants to learn how to use computers and software.

Among the negative aspects, the respondents note the loss of loved ones to the coronavirus infection, losing their job, extra spendings on technical equipment, and the lack of “live” communication with friends.

In answering the question “What distance technologies entered your life in 2020?”, many respondents talk about Zoom (23.5%), Skype (11.2%), the system of distance learning at the university (5.3%), and other platforms used due to the transition to distance learning or work (2.2%). Only 21.4% of the survey participants do not note anything new; 36.4% of the respondents had difficulty answering the question.

How do the respondents assess the changes in their lives in 2020?

According to 51.3%, there has become less “live” communication. The main reasons for this are, obviously, “the pandemic”, “coronavirus” etc. (34.2%), as well as the illness and death of loved ones (12.3%).

26.6% of the respondents note the spread of distance interaction. Meanwhile, the same percentage of the survey participants write that 2020 has not brought them any good.

18.2% of the respondents notice having more free time, including the time to connect with family (6.4%). However, the same share of the respondents (18.2%) report unemployment and worsened financial status as the negative changes. This number of respondents note depression, fear, and stress.

12.3% of those surveyed answer “in no way”, showing complete indifference to what is happening. The same share of the respondents points to the increasing importance of safety during the pandemic.

10.7% believe nothing bad happened to them in 2020.

9.1% report having problems with technology. Meanwhile, 8.6% emphasize the convenience and easiness of studying from home (although a bit lesser number, 6.0%, express discontent with distance learning). Approximately the same share of the respondents note the opportunity to gain awareness and understanding of the importance of the present moment, start taking care of oneself and one’s health.

7.0% are uncomfortable with the restrictions on travel. 3.2% mention the high risk of online scams.

15.5% of the respondents give other answer options.

The remaining 3.7% of the respondents had difficulty answering.

To improve “life in the distance mode”, 14.4% of the respondents advise getting better technical equipment, 5.9% wish the pandemic would end sooner, 5.3% recommend “working on yourself”, 4.8% express a desire to return to a full life, 3.7% would like to change jobs, 2.7% advise more live communication, 2.1% would like to cancel the distance mode, the same number wishes to have more time to study, 1.6% recommend sports. The rest of the respondents refrained from answering.

Overall, the express survey demonstrates that 2020 brought a lot of new things into people’s daily lives: they had to experience self-isolation, which required them to urgently adapt to new conditions of life. Some people indicate the advantages, some report the disadvantages, some did not notice the changes and remained neutral in their assessments. However, the development of digital interaction was noted by almost all respondents.

Nevertheless, the forced accelerated nature of digitalization also gives rise to several problems, specifically:

The technical problems caused by the insufficient equipment of households and enterprises with the technology and technical support necessary for social interaction. The study of the development of digital society in Russia conducted by the Federal State Statistics Service shows that in the decade between 2010 and 2020, the number of personal computers per 100

employees rose only from 36 to 57 and the share of organizations using them in the total sample of studied organizations lowered from 93.8% to 80.7%. Moreover, this indicator dropped sharply only in the last two years, 2019 and 2020, from 93.5% to 80.7%. This can be explained by the transition to remote work with the start of the pandemic. Meanwhile, the share of households having a personal computer in the total number of households rose only from 54.5% to 72.1% in the period from 2010 to 2020 (FEDERAL STATE STATISTICS SERVICE, 2021). The sociological surveys conducted in 2020 in social service organizations in different regions show the complaints of employees about insufficient equipment with digital technology (primarily desktop computers with new software), technical failures in its operation, and the loss of necessary information (FIRSOV; VDOVINA; SAVINOV, 2020, pp. 17-18, pp. 19-20; FIRSOV *et al.*, 2021a).

The problems of digital competence among the employees of organizations, the lack or inadequacy of additional training in new digital technologies for their professional activities (FIRSOV; VDOVINA, 2020, pp 69-86).

The problems of digital literacy of the population, the lack of appropriate publicly available training courses for different social groups and segments of the population based on their age, educational, psychological specifics, the specifics of work and family employment, etc.

Social exclusion of vulnerable groups due to low digital literacy or lack thereof. This exclusion involves the limitation or denial of access to vital social institutions for particular individuals, which prevents them from obtaining the resources necessary to maintain an adequate standard of living. Critical spheres of daily life are being digitalized (the consumption of goods and services, access to public authorities and financial and monetary transactions, labor, education, culture etc.), yet the mastery of new technologies is left to the users themselves. As a result, many elderly people, people with mental disabilities, residents of remote and small rural areas, low-income people who cannot afford to buy new generation technology and pay for its setup, software, and use for necessary purposes, etc.; “drop out” of the life of digital society. There emerges a risk of marginalization of individuals and social groups, a “digital” basis for social stratification due to the lack of technology or digital competence.

Limitations of direct interpersonal communication. Even the most up-to-date technology can only supplement but not replace emotional and physical contact in interpersonal communication. Technology cannot transfer what a person feels and experiences in direct contact. This creates a certain problem in creating and reinforcing strong friendships, informal

assistance, and family relationships. The experience of the formation of stable marital and family unions by people who met and built communication exclusively online is yet understudied.

Excessive flow of digital information. The flow of information in social networks, messengers, etc.; containing both useful and useless, sometimes even malicious information, virtually “collapses” on ordinary people and professionals alike. This takes time away from comprehending its content, does not allow concentrating on its analysis, and makes it difficult to complete important tasks because attention and efforts get “scattered” about trivial things. Children, young people, the elderly, and the disabled are especially vulnerable to inaccurate or even dangerous information (FIRSOV *et al.*, 2021b).

Emotional exhaustion and burnout in the families with members forced to work and study remotely. As people stay at home 24/7, the boundaries between work, school, and family and leisure activities become blurred. Home space and digital technology in families are often insufficient for continuous work and learning activities, which can provoke clashes between family members over the use of home computers, etc. Parents of students sometimes have to perform non-traditional pedagogical functions in the course of distance learning (explaining lesson materials, doing other educational work that used to be done in the classroom under the professional guidance of the teacher etc.).

The cybersecurity of online interaction, the constant risk of falling victim to online fraud, the law enforcement lagging in the necessary response to the new schemes of unscrupulous and criminal use of digital innovation for malicious purposes, the vulnerability of ordinary citizens, especially the socially vulnerable groups, to cybercrime and “online frauds” (MKRTUMOVA *et al.*, 2019).

The total digital control over citizens’ lives. In itself, control by means of different gadgets used to improve everyday life is quite functional and justified (the prime examples of this are the use of video cameras in streets and institutions, “smart homes”, etc.). What raises concern is the excessive, unjustified control carried out against people’s wishes and legal and/or ethical norms and used exclusively for commercial or even criminal purposes (spam, phishing, unprotected personal data etc.).

What comes as a result of this is the risk of social and psychological tension and distrust of digitalization, technophobia, and the inability to rationally use the advancements of scientific and technological progress to increase personal and social well-being.

Based on R. Merton’s methodology, the transformations in social interaction associated with COVID-19 can be distinguished into functional and dysfunctional. The functional

transformations include those that contribute to adaptation to the changed conditions, and dysfunctional transformations, accordingly, are the ones that inhibit adaptation. Moreover, the aforementioned changes can be grouped into the explicit, the ones that are implied and recognized by people, and latent, which are not implied or recognized (MERTON, 2006, p. 146). Undoubtedly, there are no insurmountable boundaries between these options, the circumstances are fluid, people's interaction is to some extent ambiguous, and it can be evaluated from different perspectives.

Some possible variants of apparent functional changes are as follows:

- the process of digitalization of all spheres of social development has accelerated;
- a new type of social interaction, digital interaction, continues to take shape;
- online opportunities for learning, daily life, work, consumption of goods and services, etc.; are expanding.

The non-obvious functional consequences, on the other hand, include the following:

- the population and organization will advance in the mastery of new digital technology quicker;
- the spatial and temporal borders of business and personal interactions are broadening, the expenses of work outside the office, etc.; are reducing (KOSMAKOVA, 2021), there are fewer spendings on travel, clothing, and shoes for those who work remotely, etc.;
- more opportunities for learning activities, higher work efficiency due to reduced travel costs, the availability of services in an online format, etc.

At the same time, some dysfunctional changes in the conditions of the development of digital interactions can be outlined:

- The difficulties of material and technical support for forced digitalization have grown. Since the beginning of 2021, prices for various gadgets have increased by 5-20%. Meanwhile, the initial price increase was recorded back in 2020 (ZHABIN, 2021);
- Digital interaction can never make up for direct "live" communication, and cannot compensate for the atmosphere of physical and emotional contact. It can only supplement them, or replace them for a while;
- Cybersecurity and cyberthreats are an issue.

Among the latent problems of the development of digital interaction are:

- Social stratification provoked by forced digitalization and a sharp rise in the prices of digital technology. Not all individuals and social groups have access to services for its maintenance (configuration of programs, repairs, etc.). Accordingly, the marginalization of those who have been unable to adapt to the new conditions of virtual reality is likely;

The experience of developing stable friendships and marital and family unions in people who built their interaction exclusively based on online technologies is understudied. In addition, there is demand for special research on the transformation of relationships between family members forced to transition to the “remote format” in the pandemic; threats to the sustainability of interaction are possible here;

The home environment is not always suitable for remote work (space, technology, etc. may not allow for it). The blurring of boundaries between work time and leisure time can lead to emotional burnout.

The established contradictory nature of the development of online interaction in people’s work and private lives undoubtedly produces a new, large-scale field for productive research and creative discussions, brainstorming, and fruitful scientific work, new project solutions to the problems identified and analyzed, and the possibilities for their resolution. Both the empirical generalization of new social facts and their conceptual analysis are in demand.

The pandemic, though impactful, is temporary. Digitalization, on the other hand, is a long-term prospect, which will determine the development of society in the future. At the same time, COVID-19 has accelerated it, which imposes some limitations on this civilizational process and shows new possibilities.

Conclusion

The COVID-19 pandemic has brought about such changes in social interactions as:

- a certain transformation of social interaction toward increased mediated digital interaction;
- changes in the structure of consumption of goods and services shaped by the popularization of digital consumption (online orders, increased sales of computers, laptops, smartphones, tablets, accessories to them, etc.);
- the acceleration of the digitalization process, the aggravation of the “digital gap” between the social groups that have and have not adapted to the accelerated digitalization;
- the formation of a new basis for social stratification, aggravation of social inequality, digital marginalization of some social groups (those most affected by the pandemic, those who have lost their jobs, relatives, etc.) and the upward social mobility of others (manufacturers of medical goods, food, digital technology, etc.);

- the institutionalization of new social practices of public administration and digitalization, including those related to education;
- a new impetus to digital socialization, the transformation of intergenerational relations toward a prefigurative type of culture (in the terminology proposed by M. Mead (1988, p. 322-361), etc.

It appears that the above-described processes are of a non-discrete unidirectional nature, their functionality/dysfunctionality varies in different social institutions, social communities, and groups, for different individuals. The occurring transformations are multilevel and progress with different dynamics at the societal, group, and personal levels. This entails the need for different methodological approaches to their study.

The approaches we consider to be the most appropriate are:

- the riskological approach used to identify, measure, and address the social risks of the developing digital interactions in the pandemic and post-pandemic periods;
- the phenomenological approach used to comprehend human subjectivity through “immersing into” a person’s lifeworld in the context of digital interaction;
- the interactionist approach determined by the need for conceptual analysis of a new type of human interaction – digital interaction;
- the functional approach allowing to assess the explicit and latent functional and dysfunctional consequences of COVID-19 for the development of digital interaction;
- the socialization approach focusing on the study of the specifics of socialization in the process of digital interaction;
- the humanistic approach emphasizing the greater good for people as the fundamental goal of digital interoperability.

REFERENCES

FEDERAL STATE STATISTICS SERVICE. **Informatsionnoe obshchestvo** [Information Society]. Official website of the Federal State Statistics Service. 2021. Available: <https://rosstat.gov.ru/folder/14478>. Access: 10 Sept. 2021.

FIRSOV, M. V.; VDOVINA, M. V. Novye modeli deiatelnosti spetsialista sotsialnoi sfery v usloviakh globalizatsii i informatsionnogo obshchestva [New models of the activity of social workers in the conditions of globalization and the information society]. *In: Professionalnoe obrazovanie v usloviakh razvitiia informatsionnogo obshchestva: kontekst professionalnoi podgotovki spetsialistov sotsialnoi sfery*. Moscow: Russian State Social University, 2020. p. 69-86.

FIRSOV, M. V. *et al.* Digitalization of the Professional Activity of Managers in Social Service Organizations. **Revista GEINTEC: Gestão, Inovação e Tecnologias**, v. 11, n. 3, 2012-2021, 2021a.

FIRSOV, M. V. *et al.* Transference to a Social Work Platform 2 in the COVID-19 Pandemic. **Revista GEINTEC: Gestão, Inovação e Tecnologias**, v. 11, n. 4, p. 1505-1514, 2021b.

FIRSOV, M. V.; VDOVINA, M. V.; SAVINOV, L. I. Tsifrovizatsiia rossiiskoi sotsialnoi raboty: sovremennaia praktika i puti razvitiia [Digitalization of Russian social work: current practice and paths of development]. **Theory and practice of social development**, v. 9, 13-21, 2020.

GENERALNYI DIRECTOR. Tsifrovizatsiia i ee mesto v sovremennom mire [Digitalization and its place in the modern world]. **Generalnyi director**, 2021. Available: <https://www.gd.ru/articles/10334-tsifrovizatsiya>. Access: 10 Sept. 2021.

KOSMAKOVA, E. **Biznes na udalenske**. Pliusy i podvodnye kamni [Business in the remote mode. Pros and pitfalls]. Kontur. Bukhgalterii, 2021. Available: <https://www.b-kontur.ru/enquiry/765-biznes-na-udalenske-plyusy-i-podvodnye-kamni>. Access: 10 Sept. 2021.

MEAD, M. **Kultura i mir detstva**: Izbr. proizvedeniia [Culture and the world of childhood: Selected works.]. Trans. from English; comp. and ex. ed. KON, I.S. Moscow: Nauka, 1988.

MERTON, R. **Sotsialnaia teoriia i sotsialnaia struktura** [Social Theory and Social Structure]. Trans. from English by KAGANOVA, Z.V. ed. Moscow: AST: AST Moscow: Khranitel, 2006.

MKRTUMOVA, I. V. *et al.* Priorities in Theory and Practice of Contemporary Social Work in Russia. **Italian Sociological Review**, v. 9, n. 1, p. 119-130, 2019.

PEGORARO, R. COVID-19 **Exposure Warnings for iPhone, Android Phones**: Apps Still Await Widespread Adoption. USA TODAY., 24 Feb. 2021. Available: <https://www.usatoday.com/story/tech/columnist/2021/02/24/covid-exposure-notification-apps-iphone-android-contact-tracing/4569421001/>. Access: 10 Sept. 2021.

WORLD HEALTH ORGANIZATION. **Naimenovanie zabolevaniia, vyzvannogo koronavirusom (COVID-19), i virusnogo vozбудitelia** [Naming the coronavirus disease (COVID-19) and the virus that causes it]. World Health Organization. Global Website, 2021. Available: [https://www.who.int/ru/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/ru/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it). Access: 10 Sept. 2021.

ZHABIN, N. **Rossiian predupredili o rezkom podorozhanii elektroniki** [Russians warned of a sharp rise in the price of electronics]. MK.RU. 2021. Available: <https://www.mk.ru/economics/2021/02/10/rossiyan-predupredili-o-rezkom-podorozhanii-elektroniki.html>. Access: 10 Sept. 2021.

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