



ИГРОВЕДЕНИЕ

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Analysis of Russian and global game studies: ludology vs. narratology

Andrei A. Pugachev 

*Peoples' Friendship University of Russia (RUDN University),
10 Miklukho-Maklaya St, bldg 2, Moscow, 117198, Russian Federation*

 quadriptych@gmail.com

Abstract. The author reviews the past-to-present academic literature on game studies from the perspective of ludology and narratology. The academic study of video games has grown substantially since 2001 – the year Game Studies started publishing its first articles. Yet both ludology and narratology remain a particularly new field, especially in the Russian academic field, and many of its discussed themes have yet to attain widespread recognition. The academic articles published between 2017 and 2022 were reviewed to provide understanding of the current state of the research on ludology and narratology in various research areas. The corpus was gathered by searching publications in international database Scopus. Each article was categorized according to the type of database, period of time, the country of publication, the field of study and the frequency of citations. The applied method of quantitative research allows tracking the development of research within five years in the field of game studies. Several proposals for further research in this field were put forward. The main hypothesis of this work is that one type of methodology is more applicable than the other, considering the background. The author concludes that one type of methodology can prevail in research – depending on the region of the published article.

Keywords: ludology, game studies, computer games, online-media, entertainment, gameplay, narratology

Conflicts of interest. The author declares that there is no conflict of interest.

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Анализ российских и глобальных исследований игр: игровая механика и развитие нарратива

А.А. Пугачев 

*Российский университет дружбы народов,
Российская Федерация, 117198, Москва, ул. Миклухо-Маклая, д. 10, корп. 2*

✉ quadriptych@gmail.com

Аннотация. Рассматривается научная литература по изучению игр с точки зрения лудологии и нарратологии. Количество академических исследований, посвященных проблеме видеоигр, значительно возросло с 2001 года, когда по теме Game Studies начали публиковаться первые статьи. Тем не менее как лудология, так и нарратология остаются достаточно неизученной областью, особенно в российском академическом поле, и многие из обсуждаемых тем еще не получили широкого признания. Проанализированы научные статьи, опубликованные в период с 2017 по 2022 год, для получения представления о текущем состоянии исследований по лудологии и нарратологии в различных научных областях. Корпус собран путем поиска публикаций в международной базе данных Scopus. Каждая статья классифицирована по типу базы данных, периоду времени, стране публикации, области исследования и частоте цитирования. Примененный метод количественного исследования позволяет проследить развитие исследований в течение пяти лет в области видеоигр. Выдвинуты несколько предложений по дальнейшим исследованиям в этой области. Основная гипотеза данной работы заключается в том, что один тип методологии применяется чаще, чем другой, если смотреть на историю функционирования рынка в прошлом. Установлено, что в исследованиях может преобладать один тип методологии – в зависимости от региона опубликованной статьи.

Ключевые слова: лудология, игровые исследования, компьютерные игры, онлайн-СМИ, развлечения, геймплей, нарратология

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Introduction

Nowadays the video game industry is rapidly growing. Digital technologies bring radical changes not only to our way of life, but the consumption of entertainment as well. According to Deloitte’s 2022 Digital Media Trends survey in the United States, a vast majority of respondents are playing video games. More than 80% of both men and women say they play, with half of smartphone owners saying they play on a smartphone every day. Obviously, people born between 1990 and 2010 (Gen Z) and people born between 1980 and 2000 play the most. This, in addition, breaks the stereotype that videogames are “just for kids” or simply “about playing in a sandbox” because according to recent studies, contrary

to stereotype, the largest concentration of players are in their 30s, not teens or even college-aged. 70% of gamers are of age 18 or older. The average age is 31. All of that led to the rise of the cultural phenomenon known as videogames. And that rise of popularity managed to provide an autonomous field of study in the science world, known as “Computer Game Studies” that gained popularity during its first year and the interest remained stable until now (Figure 1). Although in Russia there are still no dedicated game studies scholarship programs, the USA and Europe in that regard are a bit ahead.

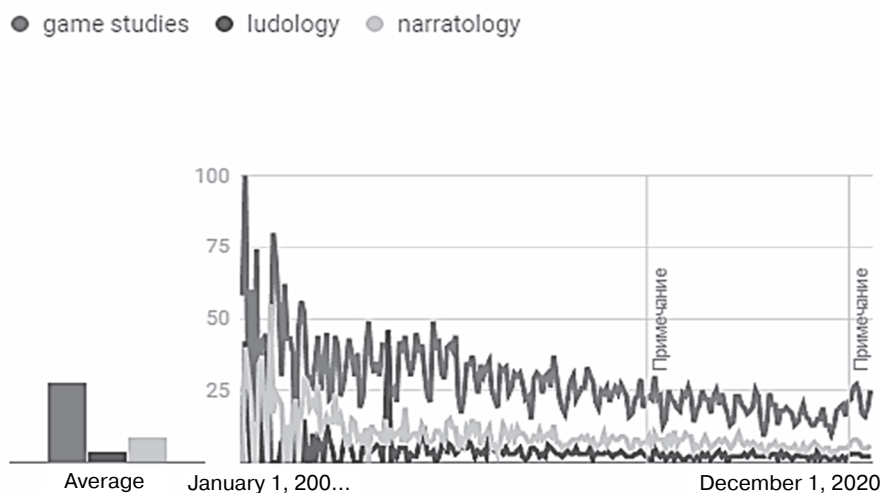


Figure 1. Search topics “Game Studies”, “Ludology”, “Narratology” in Google (Google Trends 2001–2022, global)

Note: Google trends data reflects searches people made on “Game Studies”, “Ludology” and “Narratology”. Official site. Retrieved August 12, 2022, from <https://trends.google.com/trends/explore?date=all&q=game%20studies,ludology,narratology>

Espen Aarseth is widely considered to be the pioneer of video game studies. In 2001 he published an article called “Computer Game studies, Year 1”. By doing so, he officially declared the study of the Computer Games as an independent and legitimate academic discipline. Henry Jenkins, the American media scholar said that video games, being a new form of art, deserve the same treatment in the academic field as traditional art gets.

In Russia, the year in which game studies started to appear was 2012. In that year 3 main groups of game studies enthusiasts appeared. First, the website gamestudies.ru has been opened to gather, translate and publish information from international colleagues. Later in that year, two clubs devoted to game studies opened in the philosophy departments of Moscow State University (MSU) and St. Petersburg State University (SPbSU). However, the year when game studies were considered a proper field was 2013. Center for Media Philosophy SPbSU held its first scientific conference devoted to computer games named “Computer games – the theater of action”. Two schools formed. One in St. Petersburg called “Laboratory of Computer Game Studies, LCGS” and one in Moscow under the name of “Moscow Game Center, MGC”.

On the research level both in Russia and abroad, there has been a serious disagreement, as stated before, about the methodological approach that video game studies should use. On one side there are ludologists, who focus more on the gameplay, mechanical and functional analysis of video games. On the other, there are narratologists or narrativists who perceive games as more of a traditional form of art, analyzing the storytelling and narrative used in those games. While ludologists say that the story element in games is not important, as the player will always be captivated by the gameplay, the core of the video game, and their (player's) main goal would be to figure out how to win at that particular game. Narrativists admit that yes, even if most of the games do not have and do not need a coherent story, the most popular ones (being only 5% of all gaming market) have strong narrative elements, or share the same characteristics that movies or books do.

The main hypothesis of this paper is that one type of methodology (be it ludology or narratology) is used more often than the other, due to a certain background of the game industry in the selected countries.

Method

In order to understand which method each researcher uses in their work, we decided to highlight a number of distinguishing features. We decided to distribute these features in a Table, according to the key themes that will be addressed in the article, book or monograph. The features themselves were selected according to the topics most frequently mentioned by the scholars. The paper does not present new research but explores the corpus of works on game studies. Thus, its purpose is to analyze academic literature on both ludology and narratology, written by both foreign and Russian authors and published in Scopus. We evaluated the field development, and the works that made an impact on the game industry as a whole. The following research questions have been set to achieve the goal: **RQ1.** What are the appropriate terms for discerning ludology and narratology? **RQ2.** How has the research literature on game studies developed over five years? **RQ3.** What are the study areas of games? **RQ4.** Who are the most authoritative researchers in the field of game studies? In the current paper, we developed the definition of both ludology and narratology that were used in the measurement process. We applied the method of quantitative research. We included only academic publications indexed in the Scopus within the period from 2017 to 2022. In order to review the existing literature, we identified the keywords related to game studies. Then we selected relevant terms from the keyword sections of the papers and compiled the list of words related to game studies. After that we narrowed our search only to fields related to game studies. That being “Social Sciences”, “Computer Sciences”, “Arts and Humanity Sciences”, “Engineering sciences” and “Decision sciences”. Next, we carried out a literature search in the scientific database, obtaining 40 records in total for “game studies”, 34 for “ludology” and 17 for narratology. Thereafter, we identified duplicate papers and cleared the database. And as a result of there not being duplicated papers at all, the cumulative corpus of publications was 91. Then we selected the relevant publications and coded the material by the period of time, the field of study and geographical affiliation of researchers. In order to understand which method each researcher uses in their work, we decided to high keywords.

The number of keywords related to game studies used in research from 2017 to 2022 globally on Scopus

Ludologists	Narratologists
Feedback loop – 26 474	Linearity – 17 928
Game rules – 6311	Game characters – 3291
Score state – 5375	Story structure – 2018
Numeric state – 2398	Animation techniques – 1085
Game mechanics – 2238	Narratology – 850
Agency – 1637	Role-play – 609
Interactivity – 586	Performance – 531
Ludology – 60	Visual representation – 156

Source: compiled by the author.

Results and discussion

To better understand the terminology of this work, we wanted to describe the phenomenon of game studies, ludology and narratology. “*Game studies*” is a new academic field and interdisciplinary field of learning, which focuses on games, playing and related phenomena. “*Ludology*” is the study of games and the study of games as rules, ignoring their fictional content. “*Narratology*” is the study of narrative in computer games. We searched the database only with those terms. According to Figure 2, the whole theme of computer games studies was volatile. In 2021 however it has seen a massive growth after a period of either recession or stagnation. It may be connected to the COVID-19 pandemic. The growing demand in the consumption of video games during quarantine has revealed economic changes to the benefit of this industry showing an increase in the sales within the countries with the highest video game consumers (China 250% in video game sales and Australia 285% in sales of consoles), as well as consoles during the quarantine, in short, breaking records sales and impacting the world market on a large scale. As with the revenue, the interest rose as well.

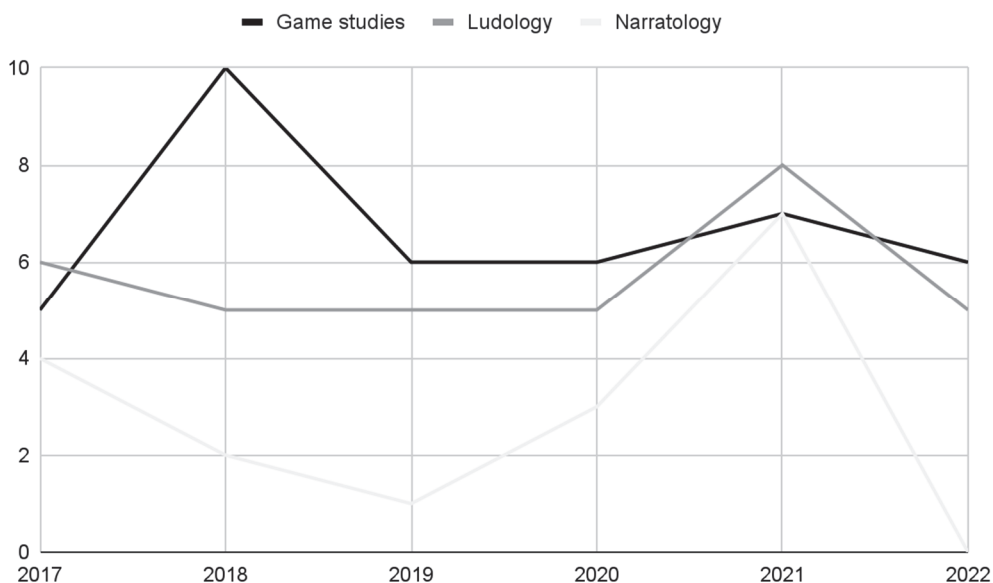


Figure 2. Number of articles published in Scopus globally by year

Source: compiled by the author.

The study also shows that 27.5% of the papers on game studies indexed in Scopus were written by Chinese scholars. The Chinese game development and research industry is at a rise with the increasing number of aspiring game studios opening up in connection with the lifting of previous restrictions (such as game console ban that lasted from 2000 to 2015). The second place in game studies is taken by the USA with 25%. The USA gaming market is the second largest after Chinese, although the number of game studies in European countries combined make up the biggest percentage, because of the origin of game studies (Norway). Data collected from the analysis of ludology and narratology papers proves to be much more interesting. 20.59% (being the largest percentage) of ludology research has been done in the US. While 17.65% of narratology research has been done in Russia, taking the second place after Spain with 23.53%.

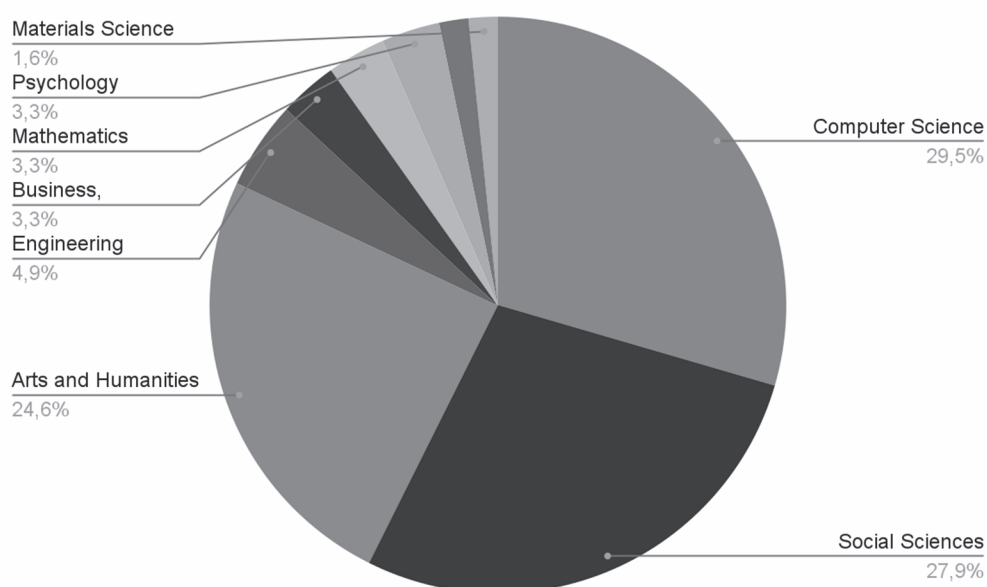


Figure 3. Research areas on ludology in the Scopus citation database, %

Source: compiled by the author.

Figures 3 and 4 present ludology and narratology research areas respectively. As both approaches are quite different in nature, it can be seen on the diagrams as well. Ludology, being strongly connected with the core mechanics and computer code of the games, makes computer sciences take 29.5% out of all citations. Same can be said about social sciences. Ludology articles often speak about social problems, discussing rules and restrictions of certain games, that can be later transferred into the practical field, outside of game studies. Gamification in media falls under the arts and humanities area, as once again, articles such as “The Limits of Gamification” talk about the humanity problem, but with a ludological approach, it being figuring out the structure and systematic model of gamification, not the contents of gamified material. On the other hand, narratology steps more into the fictional worlds of computer games, analyzing the gamification of historical events and implementation of religious themes in games. Arts and humanities area of research in narratology talks about the plot, the main storyline and themes

that are being brought up in games as in traditional art. E.g. the article under the name of “Videoludic discourse and transhumanism in soma” talks about high diegetic, philosophical and, ultimately, discursive content in the game “Soma”, not about it’s in-game mechanics or gameplay. That also explains why this area is the largest. However, narratologists still discuss and analyze computer games, and computer games, it follows, are connected to computer science.

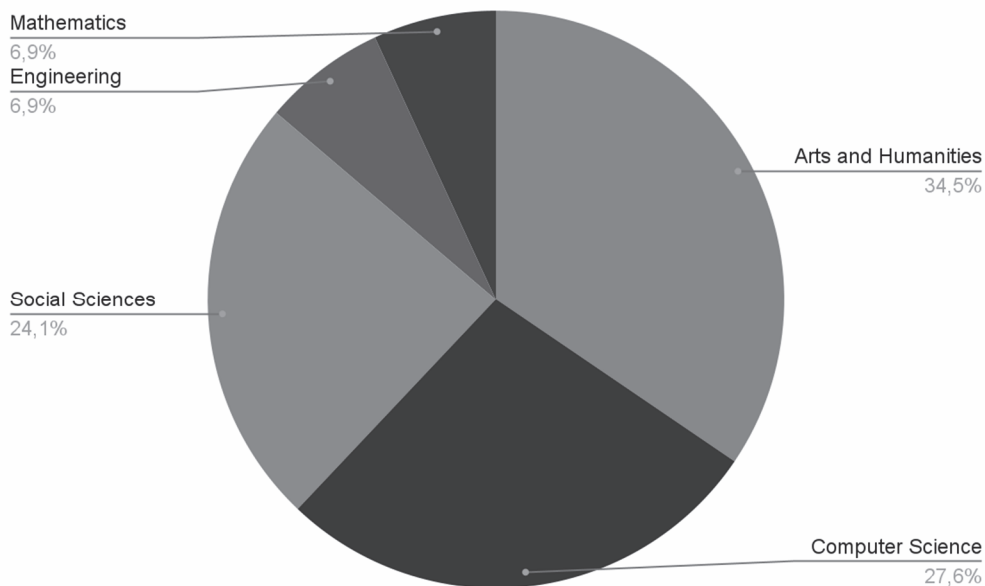


Figure 4. Research areas on narratology in the Scopus citation database, %

Source: compiled by the author.

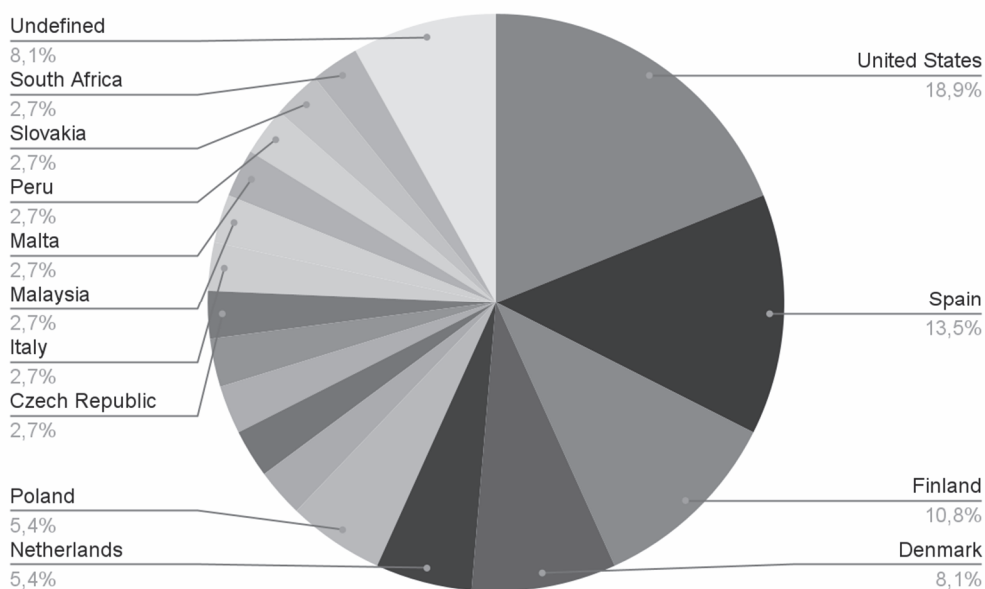


Figure 5. The country of articles' origin on ludology in Scopus citation database, %

Source: compiled by the author.

The country of origin factor articles on ludology shows (Figure 5) that most research comes from institutions in the USA (18.9%) and Spain (13.5%). American leadership in the entertainment sphere explains well the country’s high citation index. The experience USA has on the gaming market, the well-established products and popular franchises make other scholars cite USA articles more frequently. As we can see, Russia is not present in the chart. This can be explained with the peculiar history of development of the Russian gaming market. Nowadays, the industry does not have sufficient capacity to sustain itself and compete with the global developers. But, our country is taking huge steps to improvement in this field.

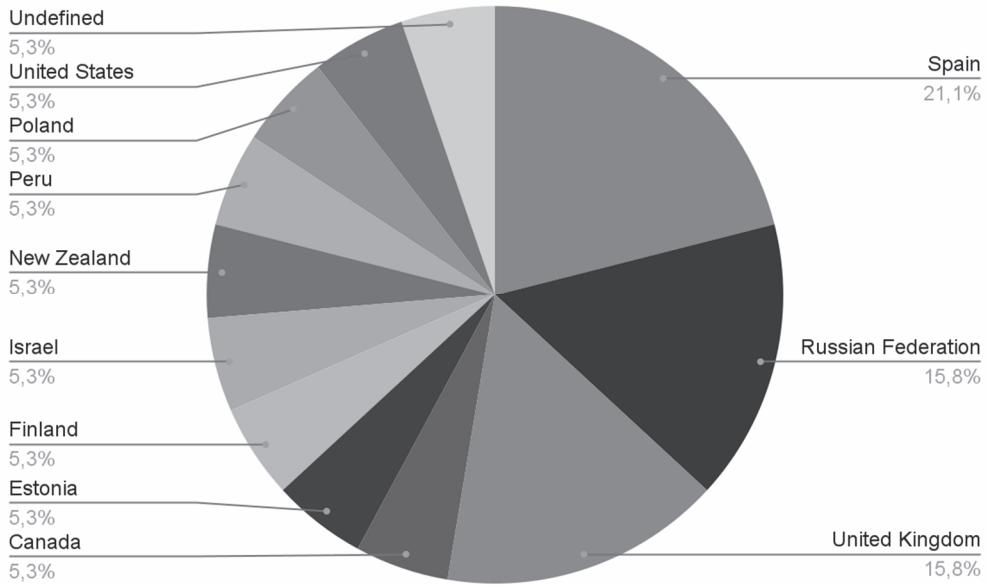


Figure 6. The country of articles’ origin on narratology in Scopus citation database, %

Source: compiled by the author.

On the other hand, in the narratology field, although with Spain still leading, Russia comes in second place (Figure 6), thus proving the hypothesis that one of the methods of game research can be prevalent based on the current state of the market and its history in the past. Once again, our assumption was that all in all, everything comes down to the availability of processing resources and experience in game development. Most Russian video game developers emphasize the story, narrative and world-building in their projects. As it is much more financially efficient to come up with a good narrative, than convoluted gameplay mechanics. However, as most scholars claim, the importance of story and narrative over gameplay can be justified by genre. And most of the games released by Russian developers fall under the genres in which plot is often more important (visual novels, point and click adventures, role-playing games).

The next step in our research was to explore the most cited papers on both ludology and narratology in game studies as a whole. One of them titled “Making Sense of Genre: The Logic of Video Game Genre Organization” by Associate Professor of Audiovisual Communication and Advertising Juan J. Vargas-Iglesias from Spain (2020). In this study the author tries to outline the logic that lies within

the constitution of videoludic genres, understanding them as formal devices configured as per the different thought functions stated by Piaget's cognitive psychology theory. Another highly cited article "Extending the theory of planned behavior (TPB) to explain online game playing among Malaysian undergraduate students" written by the group of scholars from Saudi Arabia describes modeling the determinants of actual use of online game playing. Many authors also referred to the study named "Ludologic design and augmented reality. The game experience in Pokémon Go!" written by Rodríguez-Serrano, Aarón, Spain. This study examines the narrative and ludological processes between the "Pokemon Go!" players, the most relevant "augmented reality" video game till now.

Conclusion

Our findings show that the overall number of publications on game studies increased insignificantly. From 948 to 1223 papers in the Scopus database, over the span of five years, remaining stable over the time of our observation. Same can be said about ludology with the number of papers ranging from 12 to 17. Narratology on the other hand, has been seeing a huge drop in publications, ranging from 180 published papers in 2021 and only 80 in 2022. Indeed, the year is still not over, but maybe scholars started realizing the potential of studying the true core of computer games, which is in its essence – the gameplay. This debate has been going on since the beginning of not only game studies, but computer games as a new medium as well. And in the future, using the data collected in this research, game studies can once and for all resolve the problem of choosing one methodology over the other. Maybe coming up with a combination of two, or maybe developing a completely new one that can include both gameplay and narrative aspects in it. Game studies are still an aspiring field of research that is being considered a proper area of scientific study, but we can say that not only globally, but in our country as well, it is going to become more recognized and establish a more independent base as time goes on.

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Bio note:

Andrei A. Pugachev, PhD scholar, Department of Mass Communication, Philological Faculty, Peoples' Friendship University of Russia (RUDN University). ORCID: 0000-0001-6722-2431. E-mail: quadriptych@gmail.com

Сведения об авторе:

Пугачев Андрей Алексеевич, аспирант, кафедра массовых коммуникаций, филологический факультет, Российский университет дружбы народов. ORCID: 0000-0001-6722-2431. E-mail: quadriptych@gmail.com