A Criticism of Computer Game "Ontological Models"

Stulikov Nikita

Independent Researcher
85355 Post restant, Sutomore, Opština Bar
Montenegro
+38267148910
Nikita.Stulikov@student.msu.ru

This paper presents a completed critical work on the extended application of Aarseth and Grabarczyk's "ontological meta-model" (2018) and aims to demonstrate a "meta-ontological" approach towards connecting different game ontologies.

The wide dissemination of computer games (CG) has influenced interdisciplinary debates on ontological questions about games' fundamental components. To argue, more game definitions have been elaborated in the last fifteen years than ever before (Stenros, 2016). Game researchers develop these questions in many new approaches. They describe their results with game and CG "ontological models" ("OM"). Nowadays scholars call game "OM" a description that answers the questions: "What are games?" What do they consist of?", etc. (Aarseth, 2014, 484).

Game ontologists usually use Quine's conception, which takes "ontology" as a set of commitments to what there is, that a theory adopts and undertakes not to retreat (1948, 28). Therefore, any game theory contains an ontology. By means of this, there might be a discrepancy between game "OMs". This is an especially sharp problem for interdisciplinary game studies. Every discipline gives its own answer to the question "what are games?" Also, researchers usually draw their attention to a particular aspect of the game.

Aarseth and Grabarczyk developed a game "ontological meta-model" ("OM-M") to connect, coordinate and compare different game "OMs" (2018). The game "OM-M" is a description that shows a connection between game descriptions themselves. I discuss it within Van Inwagen's "meta-ontological" framework (1998).

The meta-ontological approach allows us to consider computer game models pluralistically. To support this view, I refer to Williamson's model-building project (2017) and understand "critique" in a transcendental way. Unlike a dogmatic argument, a critical one withdraws a presumed foundation of a theory "without otherwise wanting to decide anything about the constitution of the object" (Kant, 1998, 436).

So far, no one (except the authors of the meta-model themselves) has used the meta-model to connect other game models. To demonstrate an extended application of the "meta-ontological" approach to connecting CG "OMs" I achieved the following research objectives:

1) Identified and described 26 CG "OMs" with their philosophical foundations;

2) Compared 24 of the identified CG "OMs" using the game "OM-M";

3) Considered the results of a game "OM-M" extended application.

20 out of 24 compared models were never compared in the meta-model before, and 3 more of them were not included in it in their full form. I distributed 26 models to 4 fundamental strategies for conceptualising and developing questions about game ontology. These are:

1) 12 CG "OMs" built on or against the Wittgensteinian position towards games. These are Zigfeld's interactive literature model (1989), Klabbers's (2003), Aarseth & Elverdam's (2007), Bjork & Holopainen's game-design patterns model (2005), Aarseth's "simple model" (2014), Aarseth & Calleja's "cybermedia model" (2009), Debus's rule-metagame model (2017), Aarseth's "cybertextual machine" (1997), Juul's "classical game model" (2005), Tavinor's (2009), Karhulahti's pragmatic model (2020) and Debus's "Unifying game ontology" (2019).

2) 4 CG "OMs" built in the Huizingian tradition. These are Salen & Zimmerman's (2004), Sicart's "playthings ontology" (2021) and two versions of Frasca's (2001, 2007).

3) 7 CG "OMs" built within the framework of the phenomenological approach to the study of CGs. These are Ermi & Mäyrä's gameplay model (2011), two versions of Vella's (2015a, 2015b), Gualeni's conception of "augmented ontologies" (2015), Gualeni & Van de Mosselaer's (2020), Walther's (2007) and Majkowski's (2020).

4) 3 CG "OMs" built upon the philosophy of speculative realism. These are Bogost & Montfort's "flat model" (2009), Vetushinkiy & Galanina's "intermediate model" (2017) and Galanina & Akchelov's model of virtual worlds (2020).

In addition, I compared the game "OM-M" with some alternative ways of connecting other game "OMs" (Debus, 2019; Bogost & Montfort 2009; Vetushinskiy & Galanina, 2017). The comparison showed that the game "OM-M" is the best way to systematically compare game models. Though, unlike Galanina & Akchelov's model, it does not fit for CG game virtual worlds comparison. To analyse and compare the structure of a particular CG mechanical system, it is best to use Debus's "Unifying game ontology". Many other models are excellent for certain specialised research purposes. The advantages of those models are clearly visible when included in the meta-model since several models describe some of the meta-model's categories in reacher detail than others.

I also touched on the discussions between "realists" and "nominalists", between "proceduralists" and "player-centrists", along with debates on CG media specifics. The nominalistic study of games prevails in contemporary philosophical research of game ontology. Unlike game "realists", "nominalists" refuse to define game with an essential definition that identifies game futures necessary for something to be a game. Instead, they refer to common or contextual usage of the word "game". However, "realists" frequently identify the ontological specifics of computer games. Early CG "OM" were mostly system-centric, even though nowadays, more player-centric models emerge. Authors who build their models on the "Wittgensteinian position" rarely take into account the complexity of Wittgenstein's holistic philosophical project. The same is true for models built within the Huizingian tradition. However, many game researchers adhere to the latter concept. As a result of the player-centric critique of system-centrism, CG ontology researchers began to turn more often to hermeneutic and phenomenological conceptions in the late 2000s. Today, phenomenologists and speculative realists create the most developed philosophical concepts in CG ontological research as they often thoroughly analyse and deliberately use concepts derived from their philosophical traditions.

The research indicates and negotiates the limits and foundations of CG "OMs'" set. As a result, an instrument for a multifaceted critique was provided and it became possible to choose an "ontology" better suited to studying a particular game research problem. The work supports the integrative pluralism of CG "OMs", the methodical variety, the interdisciplinarity of game studies, and the interdisciplinary exchange within it. The research helps to: keep game studies from monopolisation by a particular discipline; differentiate the vision of game ontological research area; clear up misunderstandings that may arise due to the fact that the same word (CG) has a number of different ontological descriptions.

The research results may help to improve some of the compared "OMs". Also, the "OM-M" itself can be improved by adding or removing levels to describe other models within it more accurately and precisely. Therefore, the work may help in future game ontological research.

BIBLIOGRAPHY

Aarseth E. 1997. Cybertext: Perspectives on Ergodic Literature. Baltimore, MD, USA; London, England: The Johns Hopkins University Press.

Aarseth E. 2014. "Ontology" in The Routledge Companion to Video Game Studies, edited by M. Wolf and B. Perron, 484 - 492. New York, NY: Routledge.

Aarseth E. and Calleja G. 2015. "The Word Game: the Ontology of an Indefinable Object." Paper presented at the 10th International Conference on the Foundations of Digital Games (FDG 2015), Pacific Grove, CA, USA, 22 - 25 June. Foundations of Digital Games (FDG). http://www.fdg2015.org/papers/fdg2015_paper_51.pdf.

Aarseth E. and Elverdam C. 2007. "Game Classification and Game Design. Construction through Critical Analysis." Games and Culture. 2 (1), p. 3 - 22.

Aarseth, E. and Grabarczyk P. 2018. "An Ontological Meta-Model for Game Research." Paper presented at the Digital Games Research Association Conference (DIGRA 2018), Turin, Italy, 25-28 July. Digital Games Research Association (DIGRA). http://www.digra.org/wp-content/uploads/digital-library/DIGRA_2018_paper_247_rev.pdf

Björk S. and Holopainen J. 2005. Patterns in Game Design. Hingham, MA, USA: Charles river media.

Bogost I. and Montfort N. 2009. Racing the Beam: the Atari Video Computer System. Cambridge, MA, USA: MIT Press.

Debus M. "Metagames: On the Ontology of Games Outside of Games." Paper presented at the 12th International Conference on the Foundations of Digital Games (FDG 2017), Cape Cod Grove, MA, USA, 14 - 17 August. Foundations of Digital Games (FDG). https://doi.org/10.1145/3102071.3102097.

Debus M. 2019. "Unifying Game Ontology." PhD diss. (IT University of Copenhagen). https://en.itu.dk/-/media/EN/Research/PhD-Programme/PhD-defences/2019/PhD-Thesis-Final-Version-Michael-S-Debus-pdf.pdf.

Ermi L. and Mayra F. "Fundamental Components of the Gameplay Experience: Analysing Immersion" in DIGAREC Keynote-Lectures 2009/10, 88 - 115. Postdam, Germany: Postdam. https://publishup.uni-potsdam.de/opus4-ubp/frontdoor/deliver/index/docId/5046/file/digarec06_S088_115.pdf

Frasca G. 2001. "Videogames of the Oppressed: Videogames as a Means for Critical Thinking and Debate." Master thesis in information design and technology

(Georgia Institute of Technology). https://ludology.typepad.com/weblog/articles/thesis/FrascaThesisVideogames.pdf.

Frasca G. 2007. "Play the message. Play, Game and Videogame Rhetoric." Ph. D. diss. (IT University of Copenhagen).

Galanina E., Akchelov E. and Sakharova E. 2016. "Ontology of Video Game Virtual World." Paper presented at the 28th International Business Information Management Association Conference on Vision 2020: Innovation Management, Development Sustainability, and Competitive Economic Growth (IBIMA 2016), Seville, Spain 9-10 November 2016. International Business Information Management Association (IBIM).

Gualeni S. 2015. Virtual Worlds as Philosophical Tools. How to Philosophise with a Digital Hammer. London, England: Palgrave Macmillan.

Gualeni S., Van de Mosselaer N. 2020. "The Implied Designer and the Experience of Gameworlds" Paper presented at the Digital Games Research Association Conference (DIGRA 2020), Tampere, Finland, 2-6 June. Digital Games Research Association (DIGRA). http://www.digra.org/wp-content/uploads/digital-library/DiGRA_2020_paper_36.pdf.

Juul J. 2005. Half-real: Video Games Between Real Rules and Fictional Worlds. — — Cambridge, MA, USA: MIT Press.

Kant I. 1998. Critique of Pure Reason, translated and edited by Guyer P. and Wood A. Cambridge, England: Cambridge University Press.

Karhulahti V.-M. 2020. "Computer Game as a Pragmatic Concept: Ideas, Meanings and Culture." Media, Culture & Society. 42 (3), 471-480. https://journals.sagepub.com/doi/10.1177/0163443720907010.

Klabbers J. 2003. "The Gaming Landscape: A Taxonomy for Classifying Games and Simulations." Paper presented at the Digital Games Research Association Conference (DIGRA 2003), Utrecht, Netherlands, 4-6 November. Digital Games Research Association (DIGRA). http://www.digra.org/wp-content/uploads/digital-library/05163.55012.pdf

Majkowski T. 2020. "The Birth of Heteroludoglossia from the Dissonant Languages of Videogames." Sociology of power. 32 (3), 74-90. https://socofpower.ranepa.ru/files/docs/3_2020/4.pdf

Salen K. and Zimmerman E. 2004. Rules of Play. Game Design Fundamentals. Cambridge, MA, USA: The MIT Press.

Sicart M. 2014. Play matters. Cambridge, MA, USA: The MIT Press.

Sicart M. 2021. "Playthings." Games and culture. 17 (1). https://miguelsicart.net/publications/playthings.pdf

Stenros J. 2016. "The Game Definition Game: a Review." Game and Culture. 16 (6).

Tavinor G. 2009. The Art of Videogames. Hoboken, NJ, USA: Wiley-Blackwell.

Quine W. 1948. "On What There Is." The review on Metaphysics. 2 (5).

Van Inwagen P. 1998. "Meta-ontology." Erkenntnis. 48 (2).

Vella D. 2015a. "No Mastery Without Mystery: Dark Souls and the Ludic Sublime." Game Studies. 15 (1). http://gamestudies.org/1501/articles/vella

Vella D. 2015b. "The Ludic Subject and the Ludic Self: Analyzing the 'I-in-the-Gameworld'" Ph. D. diss. (IT University of Copenhagen). https://en.itu.dk/~/

media/en/research/phd-programme/phd-defences/2015/daniel-vella---the-ludic-subject-and-the-ludic-self-final-print-pdf.pdf?la=e

Vetushinskiy A. S. and Galanina E. V. 2017. "Diversity of Ontologies: Video Games and Virtual Worlds." Paper presented at the 4th International Multidisciplinary Scientific Conferences on Social Sciences & Arts Survey, Geology, Ecology and Management 2017 (SGEM 2017), Albena, Bulgaria, 22-31 August. Survey, Geology, Ecology and Management (SGEM).

Walther K. 2007. "Self-reference in Computer Games: a Formalistic Approach." in Self-reference in the Media edited by Nöth W. and Bishara N., 219-236. Berlin, Germany; New York, NY, USA: Mouton de Gruyter.

Williamson T. 2017. "Model-building in Philosophy." in Philosophy's Future: the Problem of Philosophical Progress edited by Blackford R. and Broderick D., 159 - 172. Oxford, England: Wiley.

Zigfeld R. 1989. "Interactive Fiction: A New Literary Genre?." New Literary History. 20 (2), 341 - 372. https://www.jstor.org/stable/469105?seq=1#metadata_info_tab_contents