

Call for Contributions: „Competition in Virtual Worlds and Generative AI”

by the European Commission

Date of Submission: 11 March 2024

Immersive Cocooning – Competition between Control and Convenience

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The European Commission's recent call for proposals on "Competition in Virtual Worlds and Generative AI" addresses the current development of a variety of virtual worlds, including the emergence of new immersive products and services using new technologies such as artificial intelligence, thus creating new markets. In doing so, the Commission addresses the changes that these developments will bring to the daily lives and consumption of European citizens. This contribution on competition in virtual worlds therefore aims to provide insights from the perspective of marketing and, in particular, consumer research. Therefore, this contribution presents a conceptual framework that locates consumers within the sphere of influence of virtual platforms in order to illustrate the competition for consumers and the possible influence of platforms and the Commission on this competition.

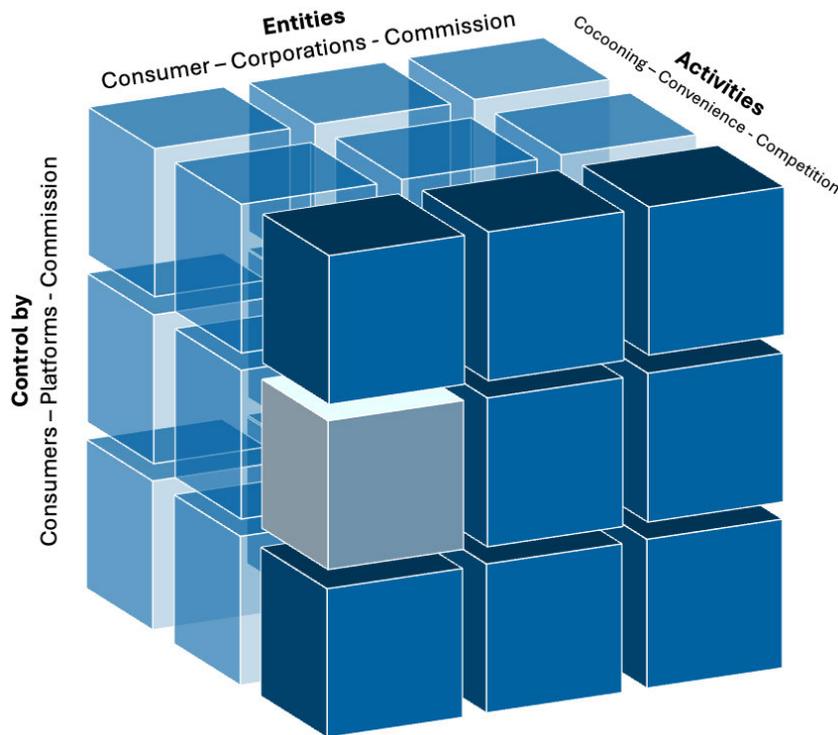


Figure 1: Framework “Immersive Competition Cube”

Three axes - entities, activities and control - define the dimensional space of this framework. From the point of view of practice theory (Reckwitz 2002; Røpke 2009), the activities of the actors involved are to be placed in relation to their power and control from the point of view of power theory (Foucault 1995; Schwan and Shapiro 2011). In short, the aim is to show which actors can exercise or are subject to power and control in this structure, which is central to the shaping of competition. In addition to consumers, the actors involved are companies and the Commission, with companies referring to platforms, media, (advertising) companies and other organisations. After a brief explanation of the three axes, this contribution addresses the question of competition in virtual worlds, which is central to this call, as the layer of the model that is most prominently presented and highlighted here. It addresses key issues such as barriers to entry, standards, and the influence of generative AI.

1st axis: Entities

In this framework, consumers are citizens who consume virtual worlds as experiences. Consumers are characterized by the consumption of products and services, whereby this consumption can be an experience for them, as well as social integration or classification (Holt 1995). Those virtual worlds are operated by companies as platforms on which other companies offer products and services to consumers and influence them with advertising content. And finally, we see the Commission as an entity that can control commercial competition in virtual worlds with the legal resources at its disposal.

2nd axis: Activities

We describe a consumer activity we could observe as 'cocooning', in which consumers surround themselves in a virtual world with both self-selected and commercially provided experiences, protecting themselves from the uncertainties of a physical lifeworld (Blackshaw 2010, 147). This activity involves the formation of close social groups that stabilise the virtual consumer identity (Belk 2014; Nechvatal 2001) through shared social values and consumption practices (Habuchi 2005). By convenience, we mean activities that are brought to consumers in virtual worlds by corporations, facilitate consumption through the use of AI technologies (Ameen et al. 2021; He and Zhang 2023; Thakur, Bandyopadhyay and Datta 2023) and can therefore also influence cocooning from the outside. Competition in turn comprises activities between corporations, e.g. a platform, companies advertising on the platform or companies that have yet to access a platform, and the virtual worlds available there (Rietveld and Schilling 2021; Weiss and Schiele 2013).

3rd axis: Control

The control exercised by technologies over consumers (Beckett 2012) as well as by consumers over technologies (Pizzi, Scarpi and Pantano 2021) is an area of tension that has been analysed in detail yet. Consumer self-control can also be understood as a mental prison in the Foucauldian sense, as in virtual worlds the collection of data

can holistically encompass all consumer activities without the need to consciously identify a guardian. This mental prison, in turn, can be controlled by platforms, and the use of AI, e.g. for the customised design of entire virtual worlds (“Canopy” n.d.) or the control of avatars (“Convai - Conversational AI for Virtual Worlds” n.d.), can intensify such control. Those platforms and the other companies operating on them could in turn be controlled by the Commission in order to protect consumers and competition.

Immersive Cocooning

A key challenge for stimulating and regulating competition in virtual worlds and generative AI is the phenomenon of "immersive cocooning". Due to the high density of recordable data points in virtual worlds, the platforms that run them have complex databases that allow for the "Manufacturing [of] Customers" (Zwick and Denegri Knott 2009). We have concerns that, on the basis of such data, this phenomenon previously initiated by consumers can now be actively pursued by platforms and their client corporations, e.g. by creating products based on customer behaviour recorded in virtual reality (Gao and Liu 2023; Haleem et al. 2022; Khan et al. 2022). Moreover, the use of AI in virtual worlds, e.g. AI-based avatars, may lead consumers to develop trusting relationships with such representations of AI (Huang, Kim and Lennon 2022). Such stimulation by AI in virtual worlds can lead to a loss of autonomy for consumers (Gonçalves et al. 2024; Kim 2022), which we understand as externally determined cocooning in the sense of the mental prison mentioned above. The protection of this autonomy is not only central to the protection of consumers as representatives of democratic societies (Bjørlo, Moen and Pasquine 2021), but, in our view, fundamentally challenges competition in virtual worlds under the influence of generative AI.

In this sense, we would like to support the workshop with our framework on immersive cocooning from a consumer research perspective and discuss ways in which consumer autonomy can be protected. In our view, this protection can be achieved by clearly promoting competition on virtual world platforms, provided that barriers to entry are low and ethical standards for data collection and AI-based data use are high.

References

- Ameen, Nisreen, Ali Tarhini, Alexander Reppel, and Amitabh Anand (2021), "Customer Experiences in the Age of Artificial Intelligence," *Computers in Human Behavior*, 114, 106548.
- Beckett, Antony (2012), "Governing the Consumer: Technologies of Consumption," *Consumption Markets & Culture*, 15(1), 1–18.
- Belk, Russell (2014), "Digital Consumption and the Extended Self," *Journal of Marketing Management*, 30(11–12), 1101–18.
- Bjørlo, Lena, Øystein Moen, and Mark Pasquine (2021), "The Role of Consumer Autonomy in Developing Sustainable AI: A Conceptual Framework," *Sustainability*, 13(4), 2332.
- Blackshaw, Tony (2010), "Nostalgia," in *Key Concepts in Community Studies*, London: Sage, 145–50.
- "Canopy" <https://canopy.procedural-worlds.com/files/file/32-ai-game-development-toolkit-gaia-ml/>.
- "Convai - Conversational AI for Virtual Worlds" <https://www.convai.com>.
- Foucault, Michel (1995), *Discipline & Punish*, New York, NY: Vintage Books.
- Gao, Youjiang and Hongfei Liu (2023), "Artificial Intelligence-Enabled Personalization in Interactive Marketing: A Customer Journey Perspective," *Journal of Research in Interactive Marketing*, 17(5), 663–80.
- Gonçalves, Ana Rita, Diego Costa Pinto, Saleh Shuqair, Marlon Dalmoro, and Anna S. Mattila (2024), "Artificial Intelligence vs. Autonomous Decision-Making in Streaming Platforms: A Mixed-Method Approach," *International Journal of Information Management*, 102748.
- Habuchi, Ichiyo (2005), "Accelerating Reflexivity," in *Personal, Portable, Pedestrian*, ed. Mizuko Ito, Daisuke Okabe, and Misa Matsuda, London: The MIT Press, 165–82.
- Haleem, Abid, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, and Rajiv Suman (2022), "Artificial Intelligence (AI) Applications for Marketing: A Literature-Based Study," *International Journal of Intelligent Networks*, 3, 119–32.
- He, Ai-Zhong and Yu Zhang (2023), "AI-Powered Touch Points in the Customer Journey: A Systematic Literature Review and Research Agenda," *Journal of Research in Interactive Marketing*, 17(4), 620–39.
- Holt, Douglas B. (1995), "How Consumers Consume: A Typology of Consumption Practices," *Journal of Consumer Research*, 22(1), 1–16.

- Huang, Ran, Minjeong Kim, and Sharron Lennon (2022), "Trust as a Second-Order Construct: Investigating the Relationship between Consumers and Virtual Agents," *Telematics and Informatics*, 70, 101811.
- Khan, Sameen, Sarika Tomar, Maryam Fatima, and Mohd Zaheen Khan (2022), "Impact of Artificial Intelligent and Industry 4.0 Based Products on Consumer Behaviour Characteristics: A Meta-Analysis-Based Review," *Sustainable Operations and Computers*, 3, 218–25.
- Kim, Wonkyung (2022), "Shopping with AI: Consumers' Perceived Autonomy in the Age of AI," in *Human-Centered Artificial Intelligence*, Elsevier, 157–71.
- Nechvatal, Joseph (2001), "Towards an Immersive Intelligence," *LEONARDO*, 34(5), 417–22.
- Pizzi, Gabriele, Daniele Scarpi, and Eleonora Pantano (2021), "Artificial Intelligence and the New Forms of Interaction: Who Has the Control When Interacting with a Chatbot?," *Journal of Business Research*, 129, 878–90.
- Reckwitz, Andreas (2002), "Toward a Theory of Social Practices," *European Journal of Social Theory*, 5(2), 243–63.
- Rietveld, Joost and Melissa A. Schilling (2021), "Platform Competition: A Systematic and Interdisciplinary Review of the Literature," *Journal of Management*, 47(6), 1528–63.
- Røpke, Inge (2009), "Theories of Practice — New Inspiration for Ecological Economic Studies on Consumption," *Ecological Economics*, 68(10), 2490–97.
- Schwan, Anne and Stephen Shapiro (2011), *Foucault's Discipline and Punish*, How to read, London: Pluto Press.
- Thakur, S. S., Soma Bandyopadhyay, and Debabrata Datta (2023), "Artificial Intelligence and the Metaverse: Present and Future Aspects," 169–84.
- Weiss, Thomas and Sabrina Schiele (2013), "Virtual Worlds in Competitive Contexts: Analyzing ESports Consumer Needs," *Electronic Markets*, 23(4), 307–16.
- Zwick, Detlev and Janice Denegri Knott (2009), "Manufacturing Customers," *Journal of Consumer Culture*, 9(2), 221–47.