Player 'superstitions' or algorithmic literacy? Marvel Rivals players' practices in the age of AI Matchmaking

Feng Zhu
King's College London
Department of Digital Humanities
London, WC2R 2LS
feng.zhu@kcl.ac.uk

Maria Ruotsalainen
University of Jyväskylä
Department of Music, Art and Culture Studies
40100 Jyväskylä
maria.a.t.ruotsalainen@jyu.fi

Keywords

Folk theories, matchmaking, algorithms, AI, Marvel Rivals

INTRODUCTION

Games and gambling have always prompted 'superstitious' beliefs concerning how to influence the outcome, such as how a die will roll. We examine what may be a contemporary instantiation of this, where *Marvel Rivals* (NetEase Games, 2024)(hereafter *MR*) players believe they can influence the AI-driven matchmaking algorithm to assign them more competent teammates and thus increase the likelihood of victory. The exact details of how the matchmaking algorithm functions is the subject of much speculation, which can be understood as a form of folk theory that are spread by content creators. However, we will ask whether these practices, despite it being impossible to definitely ascertain their veracity, can be understood not to be groundless superstition but to be demonstrative of algorithmic literacy.

In an increasingly algorithmic world, new ways of understanding and navigating algorithms emerge. Eslami et. al (2016, 2372) define "folk theories" as "those non-authoritative conceptions of the world that develop among non-professionals and circulate informally". Folk theories on algorithms function as attempts to understand the algorithms operative on a platform and to inform subsequent behaviors. Current research on folk theories has largely focused on social media use and how users navigate algorithms (Eslami et al. 2016, Lin 2025, Karizat et al. 2021) or how content

Proceedings of DiGRA 2026

creators seek to optimize their visibility through their (folk theoretical) understandings of algorithms (DeVito 2022).

Players' folk theories about game processes, especially matchmaking in competitive games, are under-researched. While some previous research has touched upon player speculation about matchmaking (Kou et al. 2018) and how the lack of transparency in matchmaking can contribute to toxicity in competitive play (Kordyaka, 2026), we propose to utilize the concept of "folk theories" to delve deeper into the specific beliefs that players hold, such as their chance of winning being sabotaged by an "EOMM agent" assigned through matchmaking. We address this gap by examining theories about matchmaking in the team-based hero shooter *Marvel Rivals*. *MR* has been thought to employ more sophistication in its matchmaking than previous team hero-shooters. Its use of AI has been widely discussed, particularly since the publication of a paper authored by the Fuxi AI Lab and NetEase (Wang et al. 2024), which introduced a novel engagement optimizing matchmaking system called EnMatch.

The move to engagement optimizing matchmaking systems is aimed at minimizing players' chance of logging off after any match (Chen et al. 2017). It arguably sacrifices skill-based considerations for engagement-based ones. As such, critics have complained about games becoming one-sided and unfair in order to keep certain players 'engaged'. Importantly, NetEase have explicitly declared that they do not use EOMM (engagement optimizing matchmaking)(Rivals 2025). This statement has, however, been subject to various interpretations.

Against this backdrop, we examine how players engage in various practices under the belief that their chances of winning the next match will be improved. We focus on the way YouTube content creators circulated folk theories about the MR matchmaking system, which then informed player practices. Content creators play a prominent role in shaping player practices – they are the "algorithmic experts" (Bishop 2020) and their content is a way for "algorithmic gossip" (Bishop 2019) to be shared.

Our data selection for the videos has been informed by an extensive netnography (Nascimento, Suarez, and Campos 2022) of *MR*, which has included spending around 800 hours watching videos from content creators discussing gameplay and matchmaking. In total, our data consists of 14 videos; top-rated comments from these videos; and NetEase papers on matchmaking. After the selection, all the videos were transcribed, and we conducted reflexive thematic analysis (Braun and Clarke 2021) of the data.

Our preliminary results reveal a number of folk of theories present in the data and show how the YouTube videos, together with the space for viewers' comments below, constitutes a "collective resource for knowledge production" as well as a "subversive" response to uneven power relationships (Bishop 2019, 2593) – the opacity of the matchmaking process for players in this case. However, unlike the "algorithmic experts" identified by Bishop (2020), who do not critique the business model of the platform and who ultimately teach others to be complicit with it, the *MR* content creators tend to be intensely critical of the matchmaking. They decry such matchmaking as inimical to good, fair, games and as exploitative of players. The most

frequent among the folk theories given to players is to temporarily stop playing the game under certain conditions – a strategic refusal of the given conditions of play (cf. "demotivational folk theory" (DeVito 2022)). Content creators also advocated myriad different strategies to navigate and "beat" the algorithm, a way of navigating algorithms also known as "actionable folk theory" (DeVito, 2022). We will outline some of the most common strategies and explain the reasonings behind them.

This critical position towards matchmaking was by no means universal. It has met with pushback from those who *believe* in the official NetEase statements and who regard the folk theories as 'conspiracy theories', casting adherents as making excuses for their own poor play. The "git gud" discourse (Felczak 2025) looms large here, arguably revealing tensions between meritocratic beliefs in competitive play (Paul 2018) and the masculine 'hacker' ethos that attempts to decipher complex systems or form folk theories on algorithms.

Overall, our results highlight competitive gaming in *MR* as a sphere in which practices in response to black-boxed systems are contested. Players and content creators are keenly aware that the effectiveness of their practices cannot be definitively ascertained but that the alternative of dismissing them as mere superstition is to sanction the official NetEase position, which is associated with the clear financial interests of player retention. In this sense, the complex sense-making at stake is demonstrative of an emerging form of literacy that sits at the intersection of an "algorithmic literacy" (Oeldorf-Hirsch and Neubaum 2025), where individuals make sense of the algorithms shaping their user experience, and a systems or "gaming literacy" (Zimmerman 2009) (or non-diegetic "gaming capital" (Walsh and Apperley 2009)) that facilitates players' attempting to game such a system for their own advantage. This is so even where it manifests as a strategic refusal to play under certain conditions e.g. where it is believed that the AI matchmaking will be taught that one is engaged whilst on a loss streak. Most content creators navigated a position that saw them praising the game whilst criticizing the matchmaking; showing themselves as informed experts whilst acknowledging uncertainties; and creating content that was seen as authentic yet which also was designed to garner attention and foment outrage.

ACKNOWLEDGMENTS

The authors declared no financial support was received for this work.

REFERENCES

Bishop, S. 2019. "Managing visibility on YouTube through algorithmic gossip." *New media & society* 21 (11-12):2589-2606.

Bishop, S. 2020. "Algorithmic experts: Selling algorithmic lore on YouTube." *Social Media+ Society* 6 (1):2-11.

Braun, V., and V. Clarke. 2021. *Thematic analysis: a practical guide*. London: Sage.

Chen, Z., S. Xue, J. Kolen, N. Aghdaie, K.A. Zaman, Y. Sun, and M. Seif El-Nasr. 2017. "EOMM: An engagement optimized matchmaking framework." Proceedings of the 26th International Conference on World Wide Web.

DeVito, M.A. 2022. "How transfeminine TikTok creators navigate the algorithmic trap of visibility via folk theorization." *Proceedings of the ACM on Human-Computer Interaction* 6 (CSCW2):1-31.

Eslami, M., K. Karahalios, C. Sandvig, K. Vaccaro, A. Rickman, K. Hamilton, and A. Kirlik. 2016. "First I" like" it, then I hide it: Folk Theories of Social Feeds." Proceedings of the 2016 CHI conference on human factors in computing systems, San Jose, CA.

Felczak, M. 2025. "The "Git Gud" Fallacy: Challenge and Difficulty in Elden Ring." *Game Studies* 25 (1).

Karizat, N., D. Delmonaco, M. Eslami, and N. Andalibi. 2021. "Algorithmic folk theories and identity: How TikTok users co-produce knowledge of identity and engage in algorithmic resistance." *Proceedings of the ACM on human-computer interaction* 5 (CSCW2):1-44.

Kou, Y. Yao L. Xinning G. and E. Suzuki-Gill 2018. Playing with streakiness in online games: how players perceive and react to winning and losing streaks in League of Legends. *Proceedings of the 2018 CHI conference on human factors in computing systems:* 1-14.

Kordyaka, B. 2026. Designed for Hostility? Toxic Behavior and Ambivalent Game Elements in Online Multiplayer Game Genres. *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems*: 1-21.

Lin, H. 2025. "Oscillation between resist and to not? Users' folk theories and resistance to algorithmic curation on douyin." *Social Media+ Society* 11 (1):1-13.

Nascimento, T., M.C. Suarez, and R.D. Campos. 2022. "An integrative review on online ethnography methods: differentiating theoretical bases, potentialities and limitations." *Qualitative Market Research: An International Journal* 25 (4):492-510.

NetEase Games. 2024. *Marvel Rivals*. PC.

Oeldorf-Hirsch, A., and G. Neubaum. 2025. "What do we know about algorithmic literacy? The status quo and a research agenda for a growing field." *New Media & Society* 27 (2):681-701.

Paul, C.A. 2018. *The toxic meritocracy of video games: Why gaming culture is the worst*. Minneapolis & London: University of Minnesota Press.

Rivals, M. 2025. "We've heard your feedback on matchmaking and ranking in Marvel Rivals, and your voices matter!". X.com, accessed Dec 5th. https://x.com/MarvelRivals/status/1958627668536311945?t=uCqk6RBlXoaytvFVHoYXJw&s=19.

Walsh, C., and T. Apperley. 2009. "Gaming capital: Rethinking literacy."

Wang, K., H. Liu, Z. Hu, X. Feng, M. Zhao, S. Zhao, R. Wu, X. Shen, T. Lv, and C. Fan. 2024. "EnMatch: Matchmaking for better player engagement via neural combinatorial optimization." Proceedings of the AAAI Conference on Artificial Intelligence.

Zimmerman, E. 2009. "Gaming literacy: Game design as a model for literacy in the twenty-first century." In *The video game theory reader 2*, edited by B. Perron and M.J.P. Wolf, 23-31. New York & Oxon: Routledge.