NATIONAL RESEARCH UNIVERSITY
HIGHER SCHOOL OF ECONOMICS

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PERSONAL BRANDS OF ESPORTS ATHLETES: AN EXPLORATION OF EVALUATION MECHANISMS

BASIC RESEARCH PROGRAM

WORKING PAPERS

SERIES: SOCIOLOGY

WP BRP 90/SOC/2019

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PERSONAL BRANDS OF ESPORTS ATHLETES: AN EXPLORATION OF EVALUATION MECHANISMS[4]

Esports organisations and athletes, being participants of an attention-driven market, are constantly discussed, compared and evaluated by spectators in a cross-media-based process on such platforms as Twitch, Reddit and others. In this work, we discuss an approach to analyse valuation practices related to esports spectatorship based on the concepts of a brand as an organising device, using computational text analysis tools and reconstruction of personal networks.

Key-words: valuation studies, exemplars, brands, esports, network analysis, text analysis

Jel Classification: Z13, E21, M31

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[4] The article was prepared within the framework of the Academic Fund Program at the National Research University Higher School of Economics (HSE) in 2017 — 2018 (grant No. 18-01-0002) and by the Russian Academic Excellence Project «5-100».

Brands in Esports[5]

In esports, cheering for favourite teams and players is an essential part of consumption (Hamari and Sjöblom 2017). Hundreds of thousands of esports spectators watch live streams of major international tournaments, cheer for favourite teams and players on platforms such as Twitch (Musabirov et al. 2018), and engage in discussions, comparisons and evaluations on major social media like Reddit afterwards (Filo, Lock, and Karg 2015). Fans of a professional Dota 2 player watch tournaments held throughout the whole professional season which roughly equals to a year. Markets drive money streams from the sponsors not only to the platforms and tournament owners, but also to esports organisations, teams, and players, guided by the attention of the public, who cheers for their favourites.

The nature of the evaluation process of sportsmen can be captured by Konberger's concept of the brand as an organising device, representing the co-creation space (Kornberger 2015) of the meaning of what constitutes good athlete and team. When evaluating brands, consumers relate to different practices and tools known as judgment devices (Karpik 2010): rankings, guides, networks of friends and strangers, etc. which help consumers to create an appropriate meaning of consumable good. Dekker (2016) shows that exemplary goods also can play a role in this process.

The brand development process is targeted to create a close relationship between an organisation (e.g. sports or an esports team), and its audience or fans (Underwood, Bond, and Baer 2001) thus making studying community opinion dimensions concerning the organisation and players an important research goal. According to Kucharska, a personal brand consists of everything which can be connected with a specific person (Kucharska 2017). In her most recent paper (Kucharska 2018), she analysed with the help of sentiment analysis how football players' media performance is connected to their performance on the market, showing that the most 'expensive' players were criticised the most. It is possible to analyse organisational brands in the same way and to understand how the types of brands interact with each other, yet the details of the interrelations between organizational and personal brands remain unclear.

[5] This section material was presented in an earlier non-archival form at ACM CHI Play 2019 (Marchenko and Musabirov 2019)

There are attempts to analyse brands in esports through the lens of value dimensions of virtual goods (Musabirov 2016; Musabirov et al. 2017). In the first work (Musabirov 2016), with the help of Reddit comments and players performance, the author describes how a personal brand can become more valuable by presenting a model of price formation of digital autographs. In the second one (Musabirov et al. 2017), the authors analyse discussions of virtual items in order to understand what makes the virtual item valuable for the player. It was found that the personal brand of professional players can influence item value significantly via digital autographs, even though it is not the main price-formation mechanism.

Uncovering Evaluation Mechanisms with Computational Tools

Computationally supported analysis of spectators' online discussions in the framework of a netnographic approach can lead to uncovering mechanisms behind fans' evaluation of players' brands. The first findings show that evaluation is based on the collision of different logics and judgement devices that help fans to define the attitude to a personality. Yet, it is unclear how do fans compare players and if players can be used as exemplars to each other. Comparisons are crucial in the formation of the evaluation dimensions. Professional players are embedded into the social structure which is formed by esports arena within which they are discussed, compared, and evaluated in connection with respect to other players and teams. By analysing discussions we uncover mechanisms behind such evaluations using perceived personal networks (Zhao et al. 2016; Boyd and Heer 2006; Hâncean, Molina, and Lubbers 2016). We show that some players within the professional Dota 2 community can be considered as exemplars (Dekker 2016). We reveal the exemplars of professional Dota 2 community with the help of personal networks of players and analysis of bi-grams.

Network analysis is an approach in studying relationships between objects usually representing groups of people (social actors) or entities (such as words in the sentences). In the network analysis, one can study nodes (connected objects) or relations between them that are usually called edges. Nodes have attributes that represent the actor's or entity's characteristics or its position in the network. Edges, in return, can have a weight and a direction. The direction shows whether the relationship is one-sided or mutual. In some cases, the relationships are with no direction when nodes share something in common that connects them in the network.

In our case, we visualize networks of players that are mentioned together in social media posts. In this way, networks help to understand what the compared brands have in common and what the contexts of discussions are that mention two brands.

By applying egocentric network analysis, we analyse relationships associated with one particular person. While the egocentric network analysis (personal network analysis) is often used on data reported by the participants, we use it to represent data reconstructed from the community discussion to help analyse which players are associated with a person of interest and reveal the composition of network from the perspective of connection between ego- and alter-node attributes, giving suggestions about the underlying mechanisms of comparisons by the spectators.

The basic approach in analysing texts, in return, is to count word frequencies which can be used in two ways. First, methods based on word frequencies help reveal the key themes and keywords in discussions. Second, researchers can apply the dictionaries of words to evaluate the presence of dictionaries in the texts. One of the most common ways to analyse word frequencies is the log-likelihood method that overcomes the problems of counting word frequencies in absolute numbers.

Analyses of absolute word frequencies highlight words that are often used in communication (e.g., prepositions, pronouns, and articles) and do not necessarily typical for the specific discussion. Words, that are more frequently used in particular discussions, in contrast to the corpus in general, can shed more light on the communication. Using the log-likelihood ratio-based method researchers can get reliable account of word prevalence in a particular text. In particular, the method penalizes words occurring in many texts, giving them lower scores and making words specific for particular texts more visible.

Separate words cannot solely represent what users were discussing. The sequences of words, in return, can show more information about the semantic context of word usage. N-grams are sequences of consecutive words that are widely used in text analysis and can be applied by netnographers to obtain a snapshot of themes occurring in the texts. In our case, we applied log-likelihood ration-based analysis to bi-grams to see what pairs of words are prevalent in the discussions of players before and after changing the team.

Two Cases: A Star and a Newcomer

We illustrate the approach we have outlined in two cases of professional Dota 2 athletes at different stages of their careers, using the data gathered from the subreddit r/DotA2.

When a player moves from one team to another, his mentions might be affected by teams' popularity: members of certain teams might get significantly more attention in the media than others.

For example, when S4 left OG, he went to Evil Geniuses which are known as one of the strongest Dota 2 teams in the world. During his OG times, s4 was associated (see fig. 1) by the community mainly with his teammates (*"n0tail jerax"*), his team (*"og good"*), and other pro-players (*"gh team", "team miracle"*), while after the transfer the most specific skip-gram is *"og pain"* which represents criticism of the community (*"leave team"*, *"just didnt", "eg just"*). According to the main version of s4 and Fly transfers, they left OG without counselling with other players which became the main theme in fans discussions of players. This also is revealed in networks of co-mentioning.

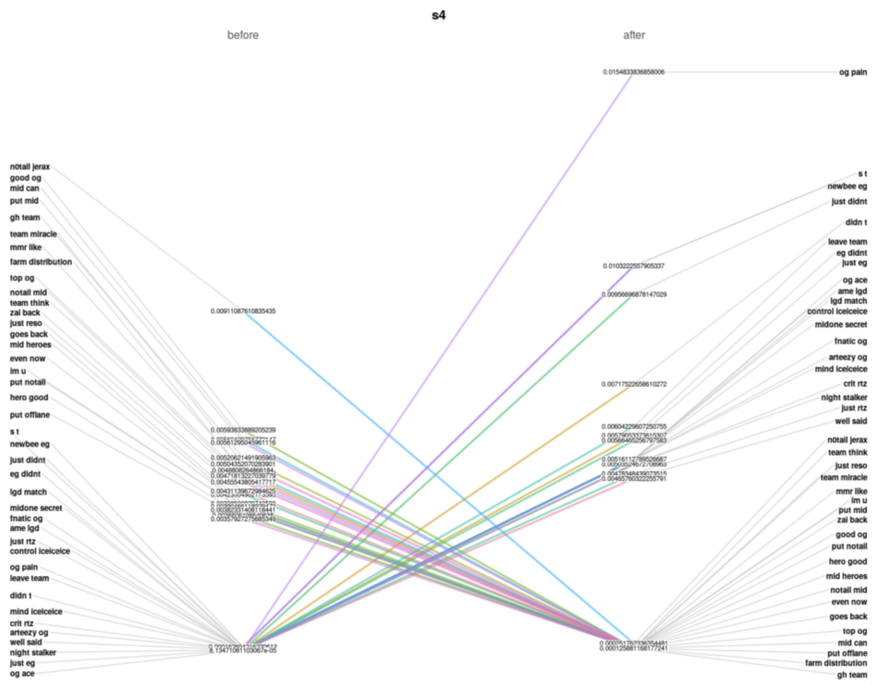

Figure 1. Skip-grams about S4 before and after his transfer between OG and EG.

In the S4 personal comparison network (see fig. 2) we can observe the close association of S4 with the former and current team. The densest parts of network reflect that association.

Firstly, we see the group of new teammates (*Sumail*, *Fly*, *Arteezy*, *Cr1t*). They have thicker relationships with S4 and between each other, meaning that they are mentioned together more often than others. Also prominent are the former teammates of Fly and S4 (*Ana* and *N0tail*) and Topson and Ceb who are often mentioned with S4 as the players who replaced Fly and S4 in OG.

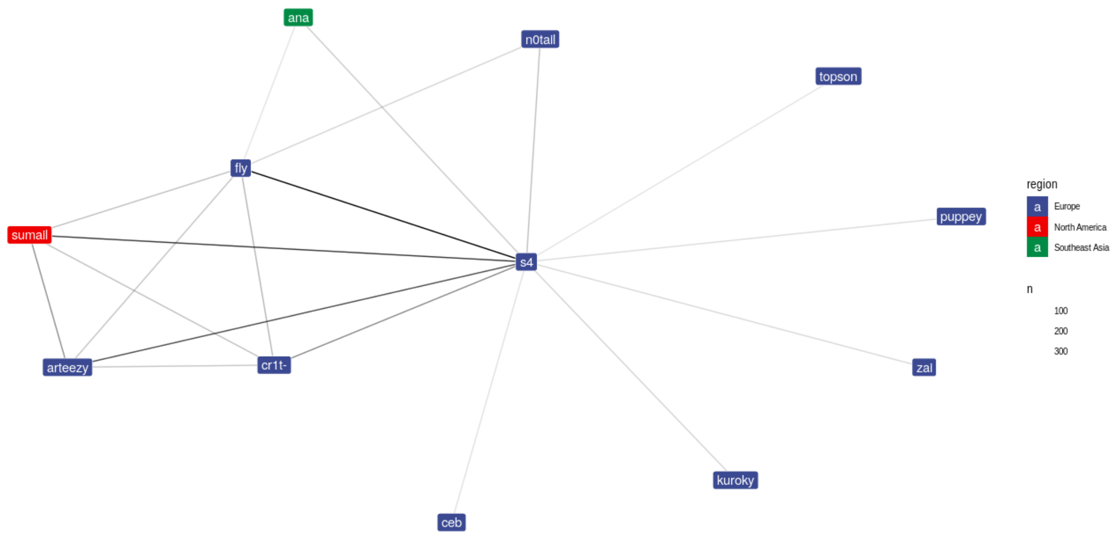

Figure 2. Network of co-mentioned players based on posts about S4. Relations with at least 100 co-mentions

RodjER is a case of another main comparison mechanism (see fig. 3). He is a player of the most popular Russian team Virtus.pro. Formerly, he was a part of team Na'Vi, the legendary Ukrainian Dota 2 tag. In the past, Na'Vi showed excellent results, but in the last few years, they perform as a semi-professional team. Before his transfer to Virtus.pro, RodjER was perceived by the community as a bad player (*"wasnt much", "poor game"*), and he was discussed with relation to his teammates only (*"navi general", "navi sonneiko"*). However, after the transfer, the situation has differed. As a part of Virtus.pro, Rodjer is now associated with other players of the best teams (*"gh yapzor", "fly solo"*) and compared to them. As bi-grams show, the community was focused on the qualities of the player rather than a transfer between two teams. Networks reveal that fans tend to pay attention to a player's performance by showing his strong association with players having the same role in the team.

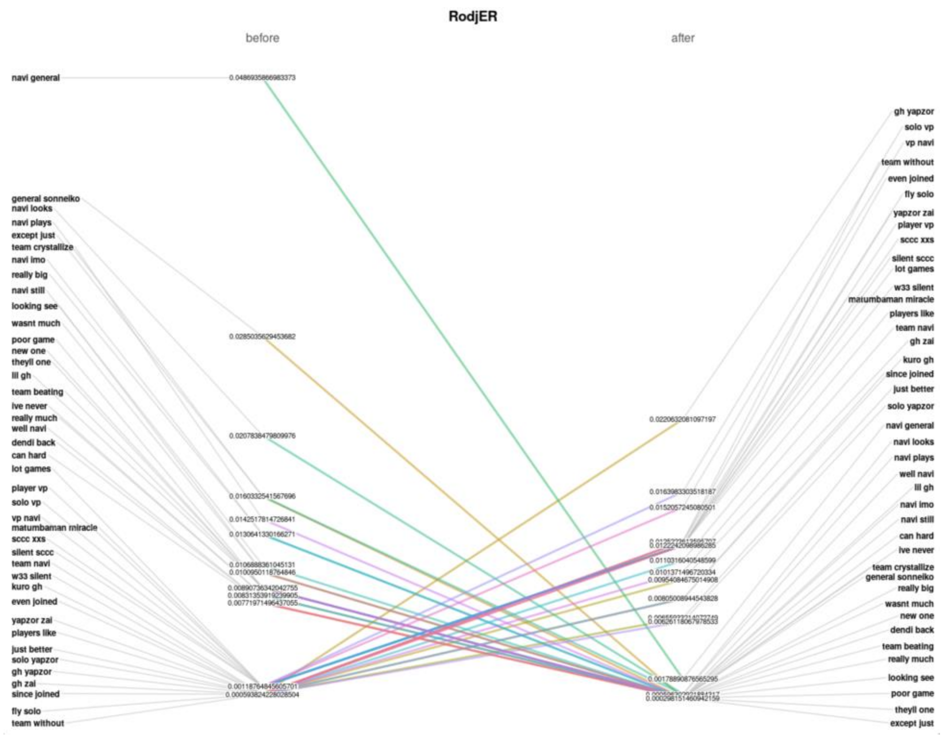

Figure 3. Skip-grams about RodjER before and after his transfer between Na’Vi and VP

In the network of co-mentions RodjER has two groups of players (see fig. 4). The first group consists of his new teammates *(Solo, Noone*, and *ramzes666)*, who are members of a “star” team, and with whom he is compared as a newcomer without a solid reputation. Players in this group have different team roles as can be seen on the network. Another group of players has the same role called ‘Support’. Having the same role means they should have a similar set of skills and make a similar set of decisions in the game. They are top level players who either won the major championship (*GH* or *Jerax*) or took high place (*Fy* or *Cr1t*). It can be suggested that RodjER is compared to them in regard to his playstyle or performance overall.

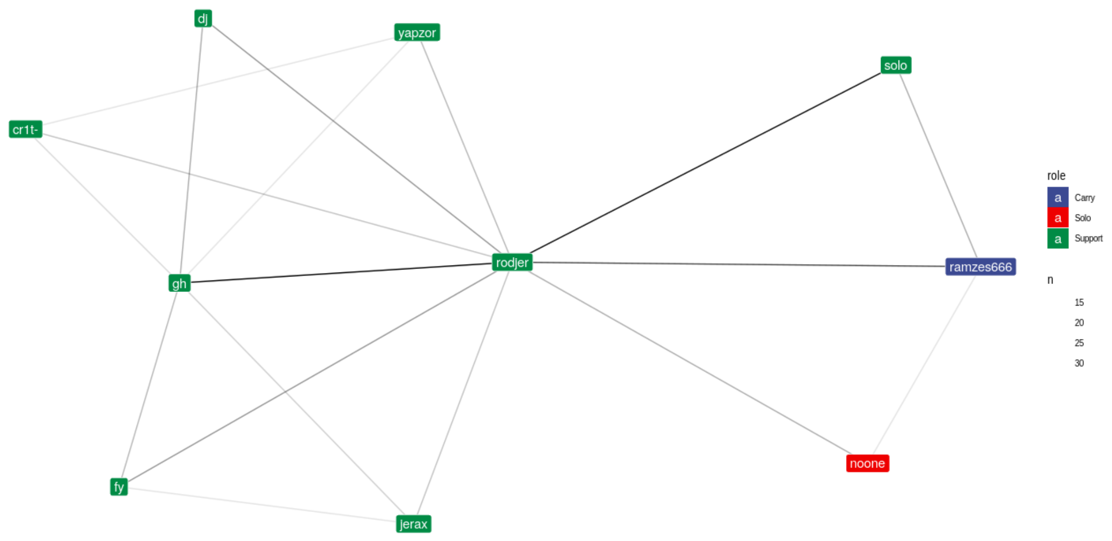

Figure 4. Network of co-mentioned players based on posts about RodjER. Relations with at least 10 co-mentions

Conclusion

Esports personalities as in any other entertainment sphere depend on the perception of the audience. Fans evaluation of the professional players is the matter of popularity and success of the latter. In this work, we show an approach to reveal the mechanisms behind the evaluation of esports athletes' personal brands in their interaction with their teams. Focusing on the cases of players' transfers between teams and combining computational text analysis tools with personal networks analysis we can capture the changes in the spectators' perception of personalities in the moment of switches from one reference system to another, and highlight the interaction of the evaluation mechanisms in play.

Having two cases of player transfers we see how different a reaction of the community can be. While in the case of S4 fans his personality and relations with other players and tend to mention ex- and current teammates, discussions of RodjER are dedicated more to the evaluation of his skills and comparison to more experienced players. This difference in chosen reference points is driven by the corresponding differences in their career stages: S4 is already a famous player whose skills are undoubted. RodjER, in his turn, did not have a credible reputation in the community. This leads to questioning his ability to play good enough in the top-tier team and to a comparison with other more high-skill players with the same role, working as exemplars of the player sharing the role to which he is compared to.

Reconstructed perceived personal networks can help us to disentangle the comparison mechanisms onto different aspects (e.g. role in the team or region of a player) and learn which aspects play the most crucial role in spectators assessment, while text analysis provides more context for the changes in evaluation of the player.

References

Boyd, Danah, and Jeffrey Heer. 2006. “Profiles as Conversation: Networked Identity Performance on Friendster.” In *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS’06)*, 3:59c–59c. IEEE.

Dekker, Erwin. 2016. “Exemplary Goods: Exemplars as Judgment Devices.” *Valuation Studies* 4 (2): 103–24. https://doi.org/10.3384/VS.2001-5992.1642103.

Filo, Kevin, Daniel Lock, and Adam Karg. 2015. “Sport and Social Media Research: A Review.” *Sport Management Review* 18 (2): 166–81. https://doi.org/10.1016/j.smr.2014.11.001.

Hamari, Juho, and Max Sjöblom. 2017. “What Is ESports and Why Do People Watch It?” *Internet Research* 27 (2).

Hâncean, Marian-Gabriel, José Luis Molina, and Miranda Jessica Lubbers. 2016. “Recent Advancements, Developments and Applications of Personal Network Analysis.” *International Review of Social Research* 6 (4): 137–145.

Karpik, Lucien. 2010. *The Economics of Singularities*. Princeton University Press, Princeton.

Kornberger, Martin. 2015. “Think Different: On Studying the Brand as Organizing Device.” *International Studies of Management & Organization* 45 (2): 105–13. https://doi.org/10.1080/00208825.2015.1006005.

Kucharska, Wioleta. 2017. “Consumer Social Network Brand Identification and Personal Branding. How Do Social Network Users Choose among Brand Sites?” Edited by Len Tiu Wright. *Cogent Business & Management* 4 (1): 1315879. https://doi.org/10.1080/23311975.2017.1315879.

———. 2018. “Personal Brand Value and Social Media. The Top Football Players’ Case.” SSRN Scholarly Paper ID 3109504. Rochester, NY: Social Science Research Network. https://papers.ssrn.com/abstract=3109504.

Marchenko, Ekaterina, and Ilya Musabirov. 2019. “Mediametrics in Esports: The Case of Dota 2.” In *Proceedings of the 2019 Annual Symposium on Computer-Human Interaction in Play*.

Musabirov, Ilya. 2016. “Deconstructing Fame : An Analysis of ESports Brand Value. The Case of Dota 2.” Master, Uppsala: Uppsala University, Media and Communication Studies.

Musabirov, Ilya, Denis Bulygin, Paul Okopny, and Ksenia Konstantinova. 2018. “Between an Arena and a Sports Bar: Online Chats of ESports Spectators.” *ArXiv Preprint ArXiv:1801.02862*.

Musabirov, Ilya, Denis Bulygin, Paul Okopny, and Alexander Sirotkin. 2017. “Deconstructing Cosmetic Virtual Goods Experiences in Dota 2.” In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems,* 2054–2058. CHI ’17. New York, NY, USA: ACM. https://doi.org/10.1145/3025453.3025893.

Underwood, Robert, Edward Bond, and Robert Baer. 2001. “Building Service Brands via Social Identity: Lessons from the Sports Marketplace.” *Journal of Marketing Theory and Practice*

9 (1): 1–13.

Zhao, Jian, Michael Glueck, Fanny Chevalier, Yanhong Wu, and Azam Khan. 2016. "Egocentric Analysis of Dynamic Networks with Egolines." In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 5003–5014. ACM.

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