

ESSAYS I/2023

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MATCH-FIXING IN TRADITIONAL SPORTS AND E-SPORTS: A COMPARISON OF CONSEQUENCES¹

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1. INTRODUCTION

Thoughts of influencing everything around us are fundamental to the human mind. It is unsurprising that over the years, people have come up with the idea of influencing even sports, especially sports results. Moreover, in recent decades, the influence of sports has developed hand in hand dynamically with the development of betting on sports events, with internet betting being essential.

The importance of online betting was fully demonstrated during the Covid-19 pandemic when it was practically the only way to bet on sporting events during the most significant restrictions.³ However, the betting world stumbled upon the fact that the whole planet, including sporting events, came to a standstill at the beginning. Unlike traditional sports, e-sports has the advantage that, with few exceptions (potentially gaming

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³ For example, in the Czech Republic during the so-called first wave, most betting offices closed on their own, in the case of the second wave, this was done on the basis of government resolution. Cf. Resolution No 1332 of the Government of the Czech Republic of 14th December 2020.

houses, boot camps etc.), playing matches at online events⁴ has not been restricted due to the risk of infection.

Due to event cancellations and the effort of bookmakers to compensate for these cancellations, e-sport betting has started to receive much more attention than before, both from bookmakers and bettors. For bookmakers, it meant listing brand-new betting opportunities and understanding the games themselves; for bettors, it meant gaining confidence in an area of betting they would otherwise not have paid much attention to it. It meant that much capital went into the area from both sides, where capital naturally attracts the opportunity for its "easy" acquisition by influencing the match.

The author feels the need to highlight this topic, especially given the circumstances in previous paragraphs, where an e-sport match is not far from a potential crime.

In its first chapter, the paper explains the concept of match-fixing and distinguishes it from spot-fixing; in the second chapter, the paper introduces some of the key decisions on the issues fulfilling the "merits" of match-fixing and its consequences in the field of classical sport. In the third chapter, the article will focus on match-fixing in e-sports and its consequences in terms of sanctions. This will be immediately followed by chapter four, where the author will try to compare these consequences from the previous two chapters with each other.

The author intends to use an analytical method mainly concerning existing and decided cases.

2. WHAT IS MATCH-FIXING? AND WHAT IS SPOT-FIXING, THEN?

The central concept throughout the paper is the term match-fixing, for which the critical element is behaviour that leads to influencing matches. This is a very general definition; however, the author considers it practically impossible to define match-fixing in much more detail due

⁴ E-sport matches can take two different forms, online and offline. In the first case, players join the game from anywhere, while in the second, everyone plays in the same arena, for example.

to the many ways the result can be influenced. In this sense, the author believes that one of the most concise definitions is the one in the Cambridge Dictionary, which reads as follows: *"dishonest activity to make sure that one team wins a particular sports match."*⁵

One of the more precise definitions then is that of Article 3(4) of the Council of Europe Convention on the Manipulation of Sporting Competitions, which, although it nowhere uses the term match-fixing, is nevertheless close in meaning when it states: *"Manipulation of sports competitions" means an intentional arrangement, act or omission aimed at an improper alteration of the result or the course of a sports competition in order to remove all or part of the unpredictable nature of the aforementioned sports competition with a view to obtaining an undue advantage for oneself or for others.*"⁶

The complexity of match-fixing itself and its forms is also represented by its division, where it is impossible to imagine only a betting lobby. However, it is a very significant part. For example, according to Hill, match-fixing in football can be divided into arranged match-fixing and gambling match-fixing.⁷ According to the classification in the previous sentence, the first case is explained in more detail by Giel, Dallmeyer, Memmert and Breuer, for example. They stated: *"One party of the contest bribes either (a) the opponent party to underperform or (b) the referee to make biased decisions in its favor. Both actions aim at securing the bribing party's victory ("cheating to win")."*⁸ In the second case, Hill sees match-fixing as a way to profit from the betting business.⁹ However, the author considers that this classification applies to any sport, definitely to all team sports. Hill's limi-

⁵ Cambridge Advanced Learner's Dictionary & Thesaurus - Match-fixing. *Cambridge University Press* [online]. 2023. [cit. 16. 4. 2023]. Available at: <https://dictionary.cambridge.org/dictionary/english/match-fixing>

⁶ Article 3(4) of the Council of Europe Convention on the Manipulation of Sporting Competitions.

⁷ HILL, Declan. Jumping into Fixing. In: *Trends in Organized Crime* [online]. 2015, vol. 3. [cit. 16. 4. 2023]. p. 214-215. Available at: <https://link.springer.com/article/10.1007/s12117-014-9237-5>

⁸ GIEL, Thomas, et al. Corruption and Self-Sabotage in Sporting Competitions – An Experimental Approach to Match-fixing Behavior and the Influence of Deterrence Factors. *Journal of Sports Economics* [online]. 2023, vol. 4. [cit. 16. 4. 2023]. p. 498. Available at: <https://journals.sagepub.com/doi/full/10.1177/15270025221134239>

tation to football was due to the paper's focus. This opinion is confirmed by Giel, Dallmeyer, Memmert and Breuer, who take this classification as the basis for match-fixing as a whole.¹⁰

From match-fixing itself, spot-fixing should be strongly distinguished. The Collins Dictionary understands spot-fixing as unfairly influencing a sporting contest without affecting the final result.¹¹ Several important facts are already apparent from this. Firstly, spot-fixing does not primarily aim to influence a sporting event's overall outcome. However, according to the author, it cannot be ruled out that such indirect influence will occur.

Secondly, suppose spot-fixing targets events not primarily intended to influence the match's outcome. In that case, it means that the above-described way of arranged match-fixing should not apply here because the bribing party is primarily concerned with winning. On the other hand, the second method mentioned above is the right one in this case because it aims to profit from the betting business, where the word "spot" in the term spot-fixing can be understood as single events that can be influenced and on which bookmakers write odds. As an example of such events on which bets can be placed in the betting business, there is a plethora of events depending on the concrete sport - for example, the number of corner kicks or the first throw-in in a football match, the number of penalty minutes in hockey, the number of points scored by players in basketball, or the result of a particular game or a fifteen in tennis.

Thirdly, an individual player can do spot-fixing, especially on occasions such as the first throw-in, etc., effortlessly, even in team sports. It cannot be clearly argued that match-fixing cannot be performed by a single player within a team sport (for example, the goalkeeper in football has, of course,

⁹ HILL, Declan. Jumping into Fixing. In: *Trends in Organized Crime* [online]. 2015, vol. 3. [cit. 16. 4. 2023]. p. 214-215. Available at: <https://link.springer.com/article/10.1007/s12117-014-9237-5>

¹⁰ GIEL, Thomas, et al. Corruption and Self-Sabotage in Sporting Competitions – An Experimental Approach to Match-fixing Behavior and the Influence of Deterrence Factors. *Journal of Sports Economics* [online]. 2023, vol. 4. [cit. 16. 4. 2023]. p. 498. Available at: <https://journals.sagepub.com/doi/full/10.1177/15270025221134239>

¹¹ Collins English Dictionary - Spot fixing. *HarperCollins Publishers* [online]. 2023. [cit. 16. 4. 2023]. Available at: <https://www.collinsdictionary.com/dictionary/english/spot-fixing>

a rather significant role in whether the opponent scores), but usually with much more significant complications than in the case of spot-fixing. Spot-fixing is also, in the author's opinion, significantly more challenging to detect in terms of player misconduct, partly because these unique opportunities are monitored to a much lesser extent (to illustrate - try to think about the last football match you watched how many corners were played and whether a strange situation preceded any of them, how the playing team got to it), partly because even a player's "mistake" can occur when he acts differently than he should as a professional. In short, it is not easy to prove intent if there is no evidence of player communication with the betting business.

This paper focuses on match-fixing, the more intensive variant of the two, so it will continue to work only with this concept. However, the author felt the need to distinguish the two key terms of this chapter, partly because of the limited familiarity with spot-fixing and partly afterwards for completeness. Conversely, the author will not distinguish between types of match-fixing in later chapters, where the concept will be pursued in terms of effect rather than cause.

3. MATCH FIXING IN CLASSICAL SPORT

3.1 KEY CASES OF MATCH-FIXING AND ITS CONSEQUENCES

In this chapter, the author will briefly highlight some of the significant cases of match-fixing in the current millennium in the so-called classical sports, focusing primarily on the consequences that have resulted for athletes. In the following subsection, the author will attempt to generalise and summarise these implications in comparison with e-sports in the next chapter.

According to the author, the first case worth mentioning is "The Whistle Scandal", which started in Brazilian football in 2005. This case involved two referees influencing the results to benefit of betting interests in return for payment. In particular, the central figure here was referee Edílson Pereira de Carvalho, who was, among other things, an international referee for

FIFA. His 11 matches in Brazil's top football competition, the Serie A, were annulled by a decision of the Supreme Court of Sporting Justice and subsequently had to be replayed.¹²

As a result, they were both banned for life from professional football¹³ and "accused by the Public Ministry of larceny, conspiracy to commit a crime and fraudulent misrepresentation."¹⁴ However, the Court of Justice of São Paulo dismissed the charges because the circumstances indicated that no crime had been committed (due to the absence of a fitting offence).¹⁵ All that remained was an attempt to obtain compensation for "material and moral damages to the fans" through a public civil lawsuit when they were viewed as consumers. In addition, the football associations concerned were also to be held liable for this sum, both at the state and federal levels.¹⁶ Both sports organisations were eventually acquitted by the Superior Tribunal of Justice of Brazil of paying compensation for the 11 cancelled matches.¹⁷

In response to this case, Law No. 10.671/03 ("Fans' Statute") was subsequently amended, whereby Articles 41C to 41E now contain match-fixing offences with punishments.¹⁸

¹² HOMEWOOD, Brian. Brazilian referee admits that he fixed matches. In: *The Guardian*. [online]. 30. 9. 2005. [cit. 20. 5. 2023]. Available at: <https://www.theguardian.com/football/2005/sep/30/newsstory.sport7>

¹³ ROHTER, Larry. Brazilians May Be Accustomed to Corrupt Officials, but Draw the Line at Soccer Referees. In: *The New York Times* [online]. 11. 10. 2005. [cit. 20. 5. 2023]. Available at: <https://www.nytimes.com/2005/10/11/world/americas/brazilians-may-be-accustomed-to-corrupt-officials-but-draw.html>

¹⁴ GODINHO, Leticia, Cassio, BARBOSA. Topics for an Academic Agenda: *The Prevention of Match Fixing in Brazil*. In: *Match-Fixing in International Sports: Existing Processes, Law Enforcement, and Prevention Strategies* [online]. 2013. [cit. 20. 5. 2023]. p. 238. Available at: https://www.researchgate.net/publication/286507480_Topics_for_an_Academic_Agenda_The_Prevention_of_Match_Fixing_in_Brazil

¹⁵ Ibidem.

¹⁶ CONSULTOR JURIDICO. The judgment of the Court of First Instance. In: *conjour.com.br* [online]. 1. 3. 2011. [cit. 20. 5. 2023]. Available at: <https://www.conjur.com.br/2011-mar-01/justica-condena-cbf-ex-juiz-empresario-pagar-160-milhoes>

¹⁷ VITAL, Danilo. STJ afasta dano moral coletivo por fraude na arbitragem do Brasileiro de 2005. In: *conjour.com.br* [online]. 27. 10. 2020. [cit. 13. 6. 2023]. Available at: <https://www.conjur.com.br/2020-out-27/stj-afasta-dano-moral-coletivo-fraude-brasileirao-2005>

¹⁸ Cf. Articles 41C to 41E, Law No. 10.671/03 ("Fans' Statute").

Another case the author feels is worth mentioning is this time from the field of individual sport, namely darts. Here it involved two consecutive cases of match-fixing in a short period by two different players, namely Kyle McKinstry and Wessel Nijman. Both of these players fixed matches, McKinstry precisely two and Nijman one, and the Darts Regulation Authority (further as "DRA") received a report on the players based on suspicious bets on their matches. Both players admitted to match-fixing; however, McKinstry only admitted to fixing one of the matches in question and refusing to provide the DRA with his phone details.^{19,20}

Nijman was given a 5-year ban by the DRA with the possibility of reducing his sentence by half if he engaged in educational and anti-corruption activities.²¹ Despite his denial of influencing one game, McKinstry was found to have influenced both. There was also a violation of the rule on his part by refusing to provide his phone data. His punishment was thus considerably more severe than that imposed in the Nijman case. McKinstry was banned by the DRA for six and a half years for influencing the matches and for a further 18 months for failing to provide data from his phone.²²

These two examples from darts are given here precisely because, as far as the author is aware, everything has been dealt with within the sports organisation itself or through its intended control mechanisms, not by other legal instruments.

As a final example, the author would like to mention a case that falls more under spot-fixing; however, as clear from the above, it is only a milder form of match-fixing that does not primarily affect the match's outcome.

¹⁹ DRA. DRA Statement on Nijman. In: *The Darts Regulation Authority* [online]. 27. 10. 2020. [cit. 20. 5. 2023]. Available at: <http://www.thedra.co.uk/dra-update-on-nijman>

²⁰ DRA. Updated DRA Statement – Kyle McKinstry. In: *The Darts Regulation Authority* [online]. 25. 11. 2020. [cit. 20. 5. 2023]. Available at: <http://www.thedra.co.uk/updated-dra-statement-kyle-mckinstr>

²¹ DRA. DRA Statement on Nijman. In: *The Darts Regulation Authority* [online]. 27. 10. 2020. [cit. 20. 5. 2023]. Available at: <http://www.thedra.co.uk/dra-update-on-nijman>

²² DRA. Updated DRA Statement – Kyle McKinstry. In: *The Darts Regulation Authority* [online]. 25. 11. 2020. [cit. 20. 5. 2023]. Available at: <http://www.thedra.co.uk/updated-dra-statement-kyle-mckinstr>

In August 2010, a cricket test match between England and Pakistan was played in London. Sports agent Mazhar Majeed was filmed by undercover reporters providing them with information in return for a cash payment that two Pakistan players would deliberately deliver *no-balls*²³ at some point in the match.²⁴

The International Cricket Council has banned three players of the Pakistan team, namely captain Salman Butt and players Mohammad Asif and Mohammad Amir.²⁵ Butt was banned for ten years, with half of the sentence suspended on the condition that he does not commit further breaches of the code and participates in an anti-corruption programme. Asif was banned for seven years, with two years suspended on the same terms as Butt's sentence. Amir was given a 5-year ban.²⁶ Subsequently, Butt and Asif's appeal to the Court of Arbitration for Sport in Lausanne did not help either, with both appeals being dismissed.^{27,28}

The case did not end there, however, as the Scotland Yard and Crown Prosecution Service took an interest in all three players and sports agent

²³ In cricket, the term no ball means a delivery played against the rules. Overstepping typically commits it; however, there are numerous ways to commit a no ball.

²⁴ CRINCIFO STAFF. Lord's Test at centre of fixing allegations In: *ESPN Cricinfo* [online]. 28. 8. 2010. [cit. 20. 5. 2023]. Available at: <https://www.espnricinfo.com/story/lord-s-test-at-centre-of-fixing-allegations-474890>

²⁵ BBC. ICC bans Salman Butt, Mohammad Asif & Mohammad Amir. In: *BBC News Sport* [online]. 5. 2. 2011. [cit. 20. 5. 2023]. Available at: http://news.bbc.co.uk/sport2/hi/cricket/other_international/pakistan/9388422.stm

²⁶ International Cricket Council ("ICC") v. Salman Butt, Mohammad Asif and Mohammad Amir. [online]. 5. 2. 2011. [cit. 20. 5. 2023]. Available at: http://icc-live.s3.amazonaws.com/cms/media/about_docs/518b6fcd97012-International%20Cricket%20Council%20v%20Salman%20Butt,%20Mohammad%20Asif%20and%20Mohammad%20Amir%20-%20Determination%20of%20the%20independent%20anti-corruption%20tribunal.pdf

²⁷ Salman Butt v. International Cricket Council (ICC), CAS 2011/A/2364. [online]. 17. 4. 2013. [cit. 24. 5. 2023]. Available at: https://jusmundi.com/en/document/decision/en-salman-butt-v-international-cricket-council-icc-award-wednesday-17th-april-2013-1#decision_9734

²⁸ Mohammad Asif v. International Cricket Council (ICC), CAS 2011/A/2362. [online]. 17. 4. 2013. [cit. 24. 5. 2023]. Available at: <https://jusmundi.com/en/document/decision/en-mohammad-asif-v-international-cricket-council-icc-award-wednesday-17th-april-2013-1>

Mazhar Majeed.²⁹ On 1 November 2011, they were all found guilty by a jury of conspiracy to cheat at gambling and conspiracy to receive corrupt payments and sentences were handed down at Southwark Crown Court by Judge Cook on 3 November 2011. Butt received a total of 2 years and six months in prison, Amir received a total of six months in a young offenders institution, Asif received a total of 1 year in prison, and Majeed received a total of two years and eight months in prison.³⁰ Majeed, Amir and Butt were not helped by appeals, all of which were dismissed.^{31,32}

To conclude this subchapter, it is appropriate to look at the current situation in the Czech Republic, where the proceeding against Roman Berbr, the former vice-president of the Football Association of the Czech Republic, is ongoing. The prosecution accuses Berbr of being at the top of an organised group that was supposed to influence matches in the Czech Republic's second and third-highest football competitions between 2019 and 2020.³³ The author is, however, fully aware that the presumption of innocence still applies to the current case.

3.2 CONCLUSION ON THE CONSEQUENCES

The examples given in the previous subsection were not chosen at random, as they show that sporting and criminal sanctions can be considered within sports. The question of what sanction will be applied depends on many factors. To some extent, these will be objective factors, such as the scale of the activity in question or the seriousness of the activity, but also factors of

²⁹ PRESS TRUST OF INDIA. Scotland Yard passes on evidence to prosecutors. In: *NDTV Sports* [online]. 17. 9. 2010. [cit. 24. 5. 2023]. Available at: <https://sports.ndtv.com/cricket/scotland-yard-passes-on-evidence-to-prosecutors-1588633>

³⁰ R v Mohammad Amir, Salman Butt. [2011] EWCA Crim 2914. Royal Courts of Justice. [online]. 23. 11. 2011. [cit. 20. 5. 2023]. Available at: <https://caselaw.nationalarchives.gov.uk/ewca/crim/2011/2914>

³¹ Ibidem.

³² R v Majeed, R v Westfield. [2012] EWCA Crim 1186. Royal Courts of Justice. [online]. 31. 5. 2012. [cit. 20. 5. 2023]. Available at: <https://caselaw.nationalarchives.gov.uk/ewca/crim/2012/1186>

³³ ČTK. Berbr plzeňskému soudu řekl, že se necítí vinen, vypovídat bude v úterý. In: *České noviny* [online]. 17. 4. 2023. [cit. 20. 5. 2023]. Available at: <https://www.ceskenoviny.cz/zpravy/2352711>

a less objective nature, such as the public or media coverage of the sport in particular, which in many cases plays a driving role in the process towards punishing athletes.

However, sporting sanctions will outweigh criminal sanctions by many orders of magnitude. For example, in 2022, Sportradar, a company that focuses, among other things, on the detection of match-fixing, recorded 169 sanctions based on the data it audited, of which 154 were sporting sanctions. Only 15 were criminal sanctions.³⁴ Based on its data, The same company states in its 2021 statistics that there have been 492 sporting sanctions and 50 criminal sanctions over the last 17 years. This is, therefore, a trend where sporting sanctions outnumber criminal ones.³⁵

The author considers this fact to be determined by inappropriate constructions of the facts of the offences and then by the circumstance that criminal law operates on the ultima ratio principle, i.e., as the most severe possible sanction for the most serious cases. At the same time, he also considers this is since the proof in criminal proceedings has shifted boundaries compared to the evidence of wrongdoing within sports associations or organisations.

4. MATCH-FIXING IN E-SPORTS

4.1 SOME SPECIFICS OF ESPORTS IN RELATION TO MATCH-FIXING

The author of the text thinks it is appropriate to briefly comment on the specifics of esports and their relation to match-fixing, mainly because the whole work tries to contrast esports with traditional sports.

Firstly, the e-sports industry is a relatively new industry and is experiencing a surge of interest from the media, sponsors, and fans. As part of this growth, people who see this as an opportunity to make a quick buck are naturally tapping into the industry. This view is shared, for example, by Oskar

³⁴ SPORTRADAR. Betting Corruption and Match-Fixing in 2021: A review by Sportradar Integrity Services. In: *Sportradar* [online]. 03/2022. [cit. 20. 5. 2023]. p. 13. Available at: https://goto.sportradar.com/SR_Betting_Corruption_and_Match-Fixing_in_2021

³⁵ Ibidem, p. 19.

Fröberg, the Founder and CEO of esports data provider Abios.³⁶ The risk of match-fixing is thus not negligible from the start.

Secondly, e-sports are quite necessarily related to technology to a much greater extent than any traditional sport, which can be both an advantage and a disadvantage compared to conventional sports. The author considers that games as such, to which e-sports are subsequently linked, have brought with them an entirely new way of match-fixing, namely cheats. Cheats, of course, aim to affect at least the player's performance, but in most cases, they have the potential to affect the outcome of the entire game.³⁷

Lastly, the author considers that in contrast to traditional sports, where people already perceive match-fixing and influencing matches in general as a relatively severe problem that can occasionally be subject to criminal sanctions, this is not the case in electronic sports. The author has the impression that one part of the public still does not understand e-sports. The other part still sees around it a kind of aura of "just a game", where they do not consider match-fixing in e-sports as such a problem that should be solved by criminal sanctions (or maybe significant sanctions in general).

There is, of course, a significant difference within continents, where the Asian world, which is the hegemon in the gaming world,³⁸ has been able to adapt and works quite well within national organisations. Of particular note is the Korean e-Sports Association (KeSPA), which works closely with government agencies.³⁹

³⁶ Abios: Combatting match-fixing and cheating in esports is crucial. In: *Esports Insider* [online]. 18. 1. 2022. [cit. 27. 5. 2023]. Available at: <https://esportsinsider.com/2022/01/abios-combatting-match-fixing-and-cheating-in-esports-is-crucial>

³⁷ SCHÖBER, Timo, Georg, STADTMANN. The dark side of e-sports – An analysis of cheating, doping & match-fixing activities and their countermeasures. *International Journal of Esports* [online]. 23. 7. 2022, vol. 1, issue no. 1. [cit. 27. 5. 2023]. Available at: <https://www.ijesports.org/article/98/html>

³⁸ CHEEMA, Sukhbir. The world's largest internet gamers: 4 Southeast Asian nations dominate top spots. In: *Mashable SEA* [online]. 5. 10. 2022. [cit. 27. 5. 2023]. Available at: <https://sea.mashable.com/life/21530/the-worlds-largest-internet-gamers-4-southeast-asian-nations-dominate-top-spots>

³⁹ SCHÖBER, Timo, Georg, STADTMANN. The dark side of e-sports – An analysis of cheating, doping & match-fixing activities and their countermeasures. *International Journal of Esports* [online]. 23. 7. 2022, vol. 1, issue no. 1. [cit. 27. 5. 2023]. Available at: <https://www.ijesports.org/article/98/html>

The international organisation Esports Integrity Commission (ESIC) is also worth mentioning here. Still, the main problem is that large video game companies that also act as event organisers (such as Riot Games) are not members.⁴⁰

4.2 KEY CASES OF MATCH-FIXING AND ITS CONSEQUENCES

The first high-profile case that received much media attention was the 2010 StarCraft match-fixing case. In this case, a total of 14 people were accused of influencing the results in exchange for financial sums. According to the official investigation, the betting turnover made by this match-fixing reached up to 140 million South Korean Won (over \$123 000). The case was particularly significant because it was the first confirmed case of match-fixing by professional gamers in the country of e-sports and gaming in general, South Korea.⁴¹

In response, there were severe punishments that did not just stay at the sporting level. A lifetime ban from the Korean pro-gaming scene was handed out to 11 players by the KeSPA,⁴² and some players got fines ranging from 2 to 12.5 million South Korean Won. Two players were then given community service sentences of 120 hours, and two players were given mandatory participation in gambling treatment of 40 hours, among other penalties. There were also four suspended prison sentences, two for six months with a probationary period of one year, one for 12 months with a probationary period of two years, and one for 18 months with a probationary period of three years.⁴³

⁴⁰ ESIC. Members & Supporters. [online]. 2023. [cit. 20. 5. 2023]. Available at: <https://esic.gg/members/>

⁴¹ YONHAP NEWS AGENCY. Prosecutors charge 14 people in StarCraft match-fixing scandal. In: *Yonhap News Agency* [online]. 16. 5. 2010. [cit. 27. 5. 2023]. Available at: <https://en.yna.co.kr/view/AEN20100516001000320>

⁴² GOSU GAMERS. sAviOr admits to match-fixing. In: *Gosu Gamers* [online]. 25. 6. 2010. [cit. 27. 5. 2023]. Available at: <https://www.gosugamers.net/news/12308-savior-admits-to-match-fixing>

⁴³ Match Fixing Scandal. In: *Liquipedia.net* [online]. 10. 4. 2019. [cit. 27. 5. 2023]. Available at: https://liquipedia.net/starcraft/Match_Fixing_Scandal

Another interesting case to point out is the case of Alexey Berezin, known by his Dota2 game nickname "Solo". He was caught betting \$100 against his team in 2013, and then his team lost, with his performance described as "suspiciously horrible". However, it was a game where neither team cared about anything, as advancement was no longer possible for either team.⁴⁴

Only sporting sanctions were applied here, and these were later reduced. Solo was banned for life, his teammates for three years, and the organisation under which the players played for one year.⁴⁵ As noted, Solo's sanction was eventually reduced to one year while at the same time acknowledging that it was the individual player's misconduct, not the entire organisation, which was cleared.⁴⁶ However, even this did not do much for the athlete himself, as the gaming organisation decided not to continue Solo within the team.⁴⁷

The 2012 MLG Summer Championship final in League of Legends was also very controversial. Two North American teams, "Dignitas" and "Team Curse," made it to the finals. Five games were played under the Best of 5 rules in the finals, and Team Curse won. After a Team Curse player confessed, it was discovered that there was an agreement between the teams before the series began. This caused, among other things, the series' first game to be played non-standardly.⁴⁸

The tournament organisers responded to this discovery by disqualifying both teams. At the same time, the teams were stripped of their prize money and points earned during the tournament, which were subsequently alloca-

⁴⁴ SCHUMACHER, Dennis. Update: roX.KIS issues statement. In: *JoinDOTA* [online]. 15. 6. 2013. [cit. 27. 5. 2023]. Available at: <https://www.joindota.com/news/9989-update-rox-kis-issues-statement>

⁴⁵ Ibidem.

⁴⁶ GOSU GAMERS. Solo's Starladder ban reduced to one year. In: *Gosu Gamers* [online]. 23. 6. 2013. [cit. 27. 5. 2023]. Available at: <https://www.gosugamers.net/dota2/news/24589-solo-s-starladder-ban-reduced-to-one-year>

⁴⁷ "SUN_TZU". Solo out of RoX.KiS. In: *JoinDOTA* [online]. 21. 6. 2013. [cit. 27. 5. 2023]. Available at: <https://www.joindota.com/news/10165-solo-out-of-rox-kis>

⁴⁸ HAFER, Leana. Top two League of Legends teams from MLG Summer disqualified for "collusion". In: *PC Gamer* [online]. 27. 8. 2012. [cit. 27. 5. 2023]. Available at: <https://www.pcgamer.com/top-two-league-of-legends-teams-from-mlg-summer-disqualified-for-collusion/>

ted to teams from third place downwards.⁴⁹ The problem with this behaviour, however, is mainly the fact that the removal of points and prize money was the only legal consequence in this case, so the punitive nature did not manifest itself much.⁵⁰

On this point, the author will allow himself only a small personal remark. Criminal law is indeed the instrument of the ultima ratio, as the author has already stated in the previous text. Thus, if other legal (or semi-legal in the form of sporting penalties) instruments are sufficient, criminal sanctions should not necessarily be resorted to. However, what is to be distinguished in the above case is that a "mere disqualification" resulted in the loss of funds and points from the tournament in question. Unlike a "ban" from subsequent tournaments, disqualification does not preclude a team from participating in future tournaments. In addition, the team lost funds and points it had earned in the tournament (although it is necessary to have the results for this). Thus, the author wonders how much effect the above punishment has in terms of the other teams that did not achieve the funds and points by their performance (for example, the team "TEAM4NOT.NA" in the above tournament). In other words, if fraudulent behaviour occurs (which is probably the closest to the above), would it be classified as a sufficient punishment for the perpetrators that the funds that were fraudulently stolen be returned to the victims? The author believes that such a penalty is wholly insufficient.

The author has chosen a recent case as a final example of match-fixing in e-sports. Malcolm Chung Wai Kiat, known within VALORANT as "germsg", was the captain of the Resurgence team that participated in the Epulze Royal SEA Cup in September 2020. Germsg's friend and teammate advised him to bet on his loss and deliberately lose to secure the money from the bet. Since germsg saw no other way to get the money from his friend

⁴⁹ Ibidem.

⁵⁰ MARTIN, Alan. Fair play and fixing: The growing pains of eSports. In: *RedBull.com* [online]. 2. 8. 2016. [cit. 27. 5. 2023]. Available at: <https://www.redbull.com/int-en/fair-play-and-fixing-the-growing-pains-of-esports>

who owed him money, he decided to use his intentional loss idea. Moreover, as captain, the team obeyed him without any problem.⁵¹

As a consequence, both players were banned for three years from all Valorant Champions Tour events by RIOT Games as the owner and developer of VALORANT.⁵² On 26 May 2023, germmsg was sentenced to 4 months in prison for one of the charges when he pleaded guilty to accepting payments in violation of the Prevention of Corruption Act. At the same time, another charge of acting against the Remote Gambling Act was considered. His friend and the team member who instigated the said conduct was sentenced to a minimum of 6 months of reformatory training a day earlier after pleading guilty.⁵³

However, at the end of this section, there are positive cases where teams or individuals have rejected match-fixing. For example, the case from the 2020 ESL ONE Germany tournament in DOTA 2, where match-fixers contacted players before the elimination matches, can be seen as evidence. Three players were offered 1 000 000 rubles, roughly 13 000 US dollars. This is even more than the prize money a team receives for finishing in the top 8 in that tournament. Instead of accepting here, there was a rejection and publication of said offer, which is the right approach.⁵⁴

⁵¹ WI-LIAM, Teh. Team captain of Resurgence, Germmsg jailed after being found guilty of match-fixing. In: *Gosu Gamers* [online]. 26. 5. 2023. [cit. 27. 5. 2023]. Available at: <https://www.gosugamers.net/valorant/news/68171-team-captain-of-resurgence-germsg-jailed-after-being-found-guilty-of-match-fixing>

⁵² DAS, Abhimannu. Riot Games Hands Three-Year Ban to “germsg” and “Dreamycsgo” for Match-Fixing in Valorant. In: *AFK Gaming* [online]. 17. 6. 2021. [cit. 27. 5. 2023]. Available at: <https://afkgaming.com/esports/news/riot-games-hands-three-year-ban-to-germsg-and-dreamycsgo-for-match-fixing-in-valorant>

⁵³ CHAI, Ruth. Sporean Valorant team captain, 24, jailed for match-fixing to win gambling bets. In: *Mothership* [online]. 27. 5. 2023. [cit. 27. 5. 2023]. Available at: <https://mothership.sg/2023/05/spore-valorant-pro-gamers-throw-match-jail/>

⁵⁴ CHEN, Patrik. Matchfixers offer \$13,000 to Yellow Submarine Players during ESL One Germany. In: *esports.com* [online]. 20. 10. 2020. [cit. 27. 5. 2023]. Available at: <https://www.esports.com/en/matchfixers-offer-13000-to-yellow-submarine-players-during-esl-one-germany-138830>

4.3 CONCLUSION ON THE CONSEQUENCES

In the previous subsection, the author tried to summarise some essential cases or, according to the author, interesting for the world of e-sports, again mainly in the direction of consequences. The author feels that he has again found examples for all sorts of sanctions and non-sanctions, both sporting and criminal.

The author considers that there is a great inconsistency in imposing penalties for these actions. This is mainly due to the widely differing legal provisions. While Asian countries can punish the conduct in question quite harshly, if necessary, with criminal sanctions, which is due, among other things, to the fact that e-sports and gaming, in general, are an idol for them, criminal sanctions are not applied in the vast majority of countries. Punishment is thus referred to as the sporting level, which may or may not be sufficient. Again, as in the case of traditional sports, this depends on the circumstances of individual cases, and the author believes that the imposition of sanctions should never operate as a generalised process without considering the specifics of the case.

5. SO IS THERE A DIFFERENCE BETWEEN THE CONSEQUENCES?

If the author has to consider whether the sanctions for match-fixing are different in traditional sports and e-sports, the first thought that comes to his mind is that they are not in general. He considers that both parts have to deal with very similar problems.

In general, the author feels that, in principle, sports sanctions can handle both sectors reasonably well, where this should be an automatic consequence naturally. However, in the most severe cases, which would also require, for example, the use of criminal law resources, the said conduct often encounters an inability to fit the said conduct under the facts of the offence.

A kind of shyness about criminal law is evidenced, among other things, by the fragmentation of how the issue is viewed by criminal law demonstrated by comparison by KEA European affairs. However, this is somewhat

older material, and the author feels that he is still able to show the problem more clearly.⁵⁵ In the Czech Republic, for example, match-fixing is dealt with mainly under § 331-334 of the Criminal Code, where the vague term "a matter of general interest" used here has been interpreted by the courts to mean that sports (specifically football) can also be subsumed under that term.⁵⁶ The author does not dispute the inclusion of sports. However, he wonders a little whether gaming (the essence of e-sports) would also fall easily within the definition.

Thus, the author asks whether it is not better to go the route of particular facts than to subordinate match-fixing to the existing general ones. The author believes that, at least from the point of view of prevention, this would have a better chance of working because it would be quite clear what the norm punishes. The potential perpetrator would be more easily aware that the norm punishes the conduct.

At the same time, the author points to the fragmentation in the form of punishments, where different offences under which match-fixing is classified provide other punishments, which according to the author, is only partially appropriate. However, criminal policy is, of course, a matter for individual states.

Shared problems also remain when it comes to proving match-fixing itself, as there are almost infinitely many influences that can affect performance without the behaviour being match-fixing. Thus, in both sectors, one has to rely mainly on the movement of the money in the betting markets or on leaked conversations where the conduct in question is arranged.

However, subtle differences between the consequences are apparent at a glance. First of all, it is necessary to mention that, unlike traditional sports, e-sports have the advantage of being able to skip the historical search for the right solution and make extensive use of those that already exist. It

⁵⁵ KEA. Match-fixing in sport: A mapping of criminal law provisions in EU 27. *KEA European Affairs* [online]. 3. 2012. [cit. 20. 5. 2023]. p. 23 - 38 Available at: https://ec.europa.eu/assets/eac/sport/library/studies/study-sports-fraud-final-version_en.pdf

⁵⁶ GANGER, Jiří. Match fixing a jeho trestněprávní aspekty. diplomová práce, *Právnická fakulta Masarykovy university* [online]. 2018. [cit. 28. 5. 2023]. p. 47. Available at: https://is.muni.cz/auth/th/rv3ds/430831_Ganger_Jiri_Diplomova_prace_final.pdf

is also worth mentioning the opposite view, namely that criminal law was beginning to adapt in part in individual states, which also took time, and e-sports came into a period when this adaptation process was already underway.

It is clear from this that e-sports have set a much higher bar compared to traditional sports much earlier and usually punish offences quite strictly. Still, the question is how the process would have looked if they had not come into at least partially adapted legislation. Also significant, according to the author, is the fact that e-sports are partly forced to behave in this way due to fears about their PR, where they are far from having the position of traditional sports, and hesitation could damage them significantly.

The author considers that the most significant difference between these consequences is that within e-sports, there is a highly fragmented state of who imposes sporting sanctions. If we take traditional sports, it will almost always be the sporting association within which the offence occurred (e.g., the Disciplinary Commission of the Football Association of the Czech Republic). In contrast, in the case of e-sports, it is a kind of strange combination where some sporting sanctions are imposed by national associations where they exist (e.g., KeSPA). However, sporting sanctions are also imposed by the tournament organisers themselves if the sporting sanctions relate to their tournaments (e.g., a ban on participation in those tournaments). In addition, some sporting sanctions are imposed by the game's owner and its developer (e.g., RIOT Games). If we add to this the different games, which will be different for each, it is a highly fragmented structure. The author believes that this fragmentation is very detrimental to e-sports.

However, according to the author, it is undeniable that the consequences of match-fixing in sports and e-sports are very similar and cannot be easily distinguished from each other.

6. CONCLUSION

The author of the text tried to compare the consequences of match-fixing in classical sports with the consequences of match-fixing in esports. For this purpose, in the first chapter, he first discussed what match-fixing is and

stopped at its distinction from spot-fixing. Then, in the next chapter, he focused on selected well-known match-fixing cases and their consequences, first discussing these in the first part and then summarising the consequences in general in the second part. In the third chapter, the same has been done for match-fixing in the case of e-sports, with the difference that in the introduction of this chapter, certain specifics that the author believes apply to e-sports have been defined.

The fourth and final substantive chapter then attempted to compare the implications of the cases within the second and third chapters and to draw out the differences in the punishment of match-fixing in the sporting and e-sports environment.

The author considers that the text concludes that there are significant similarities between the sanctions imposed in traditional sports and e-sports. The distinction between the two is made concerning region and context of circumstances, with only hardly noticeable differences compared to the similarities.

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THE TOGGLEABLE FILTER BUBBLE: PERSONALIZED INFORMATION ON AN OPT-IN BASIS⁵⁷

VOJTĚCH JUŘIČKA⁵⁸

1. INTRODUCTION

We now live in an increasingly digitized society. As the internet has made sharing and seeking information more effortless than ever, people spend more and more time there searching for various information, be it for education or entertainment. The information that can be found there varies significantly in type and quality. As such, filtering of the information has been introduced. This can be mainly seen in search engines such as Google, which automatically select webpages to add to their index, from which the search results are picked out.⁵⁹ Similarly, social media personalize the feed that is shown to the user through a scoring system managed by an algorithm using machine learning.⁶⁰ The term *filter bubble* was first introduced by Eli Pariser,⁶¹ and since then, filter bubbles, echo chambers, algori-

⁵⁷ Esej byla zpracována v semestru podzim 2022 v rámci předmětu MVV1368K Privacy and Personal Data Law. / The essay was written in the autumn 2022 semester for the course MVV1368K Privacy and Personal Data.

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⁵⁹ GOOGLE. In-depth guide to how Google Search works. *Google Search Central* [online]. 2022. [cit. 10. 12. 2022]. Available at: <https://developers.google.com/search/docs/fundamentals/how-search-works>

⁶⁰ FACEBOOK. Good Questions, Real Answers: How Does Facebook Use Machine Learning to Deliver Ads? *Facebook Business* [online]. 2022. [cit. 10. 12. 2022]. Available at: <https://www.facebook.com/business/news/good-questions-real-answers-how-does-facebook-use-machine-learning-to-deliver-ads>

⁶¹ FARNAM STREET. How Filter Bubbles Distort Reality: Everything You Need to Know. In: *Fs.blog* [online]. 2022. [cit. 10. 12. 2022]. Available at: <https://fs.blog/filter-bubbles/>

thmic personalization, and similar topics have been the subject of public debate.

The main concern mentioned regarding these topics is the informational isolation of an individual resulting in narrow access to different sources and perspectives, which strengthens the individual's own opinions.⁶² This can lead to a polarization of society, creating several hostile groups of people which are unable to reach common ground on a specific topic. This is also referred to as *Cyberbalkanization*.⁶³ Albeit the aforementioned topics are often debated, divisive opinions exist regarding their severity or even existence.⁶⁴ This essay aims to explore the idea of whether the phenomenon of filter bubbles should be regulated through an opt-in or opt-out system.

2. TERMINOLOGY

First and foremost, it is necessary to define the term *filter bubble*. The term is often interchanged with another term, *echo chamber*, so these two will be described together. Bruns states that a filter bubble is created when a group of people chooses to prefer communication with each other and thus excludes outsiders.⁶⁵ On the other hand, Fletcher defines a filter bubble as a result of algorithmic filtering, where news that a person dislikes or disagrees with is filtered out, resulting in a narrow scope of information reaching the person.⁶⁶

An echo chamber, according to Bruns, is a situation where a group of people choose to prefer connection with each other and thus exclude other

⁶² FLETCHER, Richard. The truth behind filter bubbles: Bursting some myths. In: *Reuters Institute for the Study of Journalism* [online]. 2020. [cit. 10. 12. 2022]. Available at: <https://reutersinstitute.politics.ox.ac.uk/news/truth-behind-filter-bubbles-bursting-some-myths>

⁶³ BOZDAG, Engin. VAN DEN HOVEN, Jeroen. Breaking the filter bubble: democracy and design. *Ethics and Information Technology* [online]. 18. 12. 2015, no. 17. [cit. 10. 12. 2022]. p. 249-265. Available at: <https://link.springer.com/content/pdf/10.1007/s10676-015-9380-y.pdf?pdf=button>

⁶⁴ BRUNS, Axel. Filter bubble. *Internet Policy Review* [online]. 29. 11. 2019, vol. 8, no. 4. [cit. 10. 12. 2022]. Available at: <https://policyreview.info/concepts/filter-bubble>

⁶⁵ Ibidem.

⁶⁶ FLETCHER, Richard. The truth behind filter bubbles: Bursting some myths. In: *Reuters Institute for the Study of Journalism* [online]. 2020. [cit. 10. 12. 2022]. Available at: <https://reutersinstitute.politics.ox.ac.uk/news/truth-behind-filter-bubbles-bursting-some-myths>

people.⁶⁷ Fletcher's definition of echo chambers is a state where exposition to liked and agreeable news distorts the perception of reality, resulting in a belief that reality only consists of agreeable news. That disagreeable news does not exist or is exaggerated.⁶⁸

In these definitions, the authors' similar approaches can be seen. A filter bubble filters out specific information from the mass pool of all information, thus has the effect of narrowing the information intake. The echo chamber then amplifies the filtered information, which then seems like the opposing information does not exist or its advocates are in the minority. Thus, these two phenomena have the effect of making the world seem, as if everyone had the same views and opinions as the person in question.

Another set of terms needed to be clarified are self-selected personalization and pre-selected personalization, as defined by Borgesius et al. The term self-selected personalization describes the intentional choice to filter information that a person encounters. This is something that everybody does, more or less consciously, by picking what news outlets, news stories, internet comments etc. to read. This is a result of selective exposure, a common human tendency to avoid information challenging their own point of view and to seek out affirmative information instead. Pre-selected personalization is not done by the person themselves, but by websites, advertisers, or other different actors, with or without the use of algorithms. Oftentimes, it is done so without the person's choice, input, consent or even knowledge.⁶⁹

3. THE NECESSITY OF FILTER BUBBLE REGULATION

Some, however, are of the opinion that the filter bubbles and echo chambers are not as important and as dangerous of an issue. Bruns states

⁶⁷ BRUNS, Axel. Filter bubble. *Internet Policy Review* [online]. 29. 11. 2019, vol. 8, issue no. 4. [cit. 10. 12. 2022]. Available at: <https://policyreview.info/concepts/filter-bubble>

⁶⁸ FLETCHER, Richard. The truth behind filter bubbles: Bursting some myths. In: *Reuters Institute for the Study of Journalism* [online]. 2020. [cit. 10. 12. 2022]. Available at: <https://reutersinstitute.politics.ox.ac.uk/news/truth-behind-filter-bubbles-bursting-some-myths>

⁶⁹ BORGESIOUS, Frederik J. Z., et al. Should we worry about filter bubbles? *Internet Policy Review* [online]. 31. 5. 2016, vol. 5, issue no. 1. [cit. 10. 12. 2022]. Available at: <https://policyreview.info/pdf/policyreview-2016-1-401.pdf>

that they are merely a secondary problem that diverts attention from the more pressing social and societal issues to mere technological factors. That is, if they even exist in the form they are made out to be by the prevalent social debate, as there is not enough empirical evidence supporting the existence of filter bubbles and echo chambers as observable phenomena in public communication. On the contrary, the global societal and political discourse concerning these two phenomena has assumed that they exist and harmfully impact society. According to Bruns, this discrepancy implies a moral panic connected with the transition to a new technological medium, akin to the introduction of the paper press, and an overly simplistic interpretation of the effects of this new technology. Moreover, the concepts of a filter bubble and an echo chamber were not introduced by internet communications experts but by an activist and tech entrepreneur Eli Pariser and a legal scholar Cass R. Sunstein.⁷⁰

Fletcher argues similarly while citing Bruns. He adds that excessive focus on filter bubbles can lead us to misunderstand the mechanisms at play, as the platforms like social media and search engines are not the sole cause but only a part of the picture.⁷¹

The abovementioned information, however, does not mean that we should abandon the notion of studying and regulating filter bubbles and echo chambers. As both Bruns and Fletcher pointed out, it is needed to tackle the issue more broadly. It is also possible that some form of legal regulation of these phenomena and subsequent changes in user behaviour will prompt researchers to change their methodology and thus come to more conclusive results.

Then, perhaps it is better to phrase the research question differently: Should the pre-selected algorithmic personalization be regulated through an opt-in or opt-out system?

⁷⁰ BRUNS, Axel. Filter bubble. *Internet Policy Review* [online]. 29. 11. 2019, vol. 8, issue no. 4. [cit. 10. 12. 2022]. Available at: <https://policyreview.info/concepts/filter-bubble>

⁷¹ FLETCHER, Richard. The truth behind filter bubbles: Bursting some myths. In: *Reuters Institute for the Study of Journalism* [online]. 2020. [cit. 10. 12. 2022]. Available at: <https://reutersinstitute.politics.ox.ac.uk/news/truth-behind-filter-bubbles-bursting-some-myths>

4. REGULATING PRE-SELECTED ALGORITHMIC PERSONALIZATION THROUGH AN OPT-IN OR OPT-OUT REGIME

The aforementioned choice, consent, and consequentially knowledge can be granted to the person in question through a mandatory opt-in or opt-out system. If the user would be initially asked whether they want to engage in the personalization, they would become aware of its existence. Moreover, if a choice is presented, then the user can decide whether they want to undertake the risk of receiving the personalized content and thus end up in a filter bubble and an echo chamber (if they exist and pose a substantial risk, as was mentioned above), or receive content in a non-personalized manner.

Disabling pre-selected personalization, however, has its drawbacks. Even with pre-selected personalization active, people still engage in self-selected personalization. This can be observed in the fact that, arguably, nobody opens every single link that appears in their feed. However, with the pre-selected personalization turned off, the self-selected personalization becomes more prominent. The social media feed would likely become less engaging, and the user experience on the site could be worse because, as Fletcher stated, people only possess a limited amount of time, and would thus encounter less engaging content.⁷² This could lead to people spending less time on the social media site in question. Whether that is a good or bad thing is a whole other matter.

On the other hand, giving users the possibility of experiencing pre-selected and non-pre-selected content side by side would give them the ability to compare the two experiences and choose which one they prefer. This degree of control could also, to a certain degree, mitigate the public unrest about the control of the flow of information by big corporations and, for example, their involvement in rigging elections and the like.

Regarding the question of whether opt-in or opt-out should be preferred by default, opt-in may be the better choice. That is due to the nature of hu-

⁷² FLETCHER, Richard. The truth behind filter bubbles: Bursting some myths. In: *Reuters Institute for the Study of Journalism* [online]. 2020. [cit. 10. 12. 2022]. Available at: <https://reutersinstitute.politics.ox.ac.uk/news/truth-behind-filter-bubbles-bursting-some-myths>

man interaction with pop-up windows. In the case of a default opt-out system, upon the installation of the app, users might skip the opt-out button without even paying any attention to it, similarly to cookie pop-up windows. As such, the default opt-in would result in the hurried user engaging with non-personalized content, thus minimizing the risks posed by skewed personalized content.

In the case of search engines, however, the option of disabling the pre-selected personalization makes less sense. If we take Google as an example, the relevancy of a search result is determined by hundreds of factors like quality, relevancy to the user's query, user's location, language, device etc. But if this degree of personalization ensures that *“searching for “bicycle repair shops” would show different results to a user in Paris than it would to a user in Hong Kong”*, then turning this personalization off would mean that the user would most likely end up with results that are irrelevant to him. As this would make the search engine nearly unusable, it can be concluded that a complete opt-out is not feasible in the case of search engines.

5. CONCLUSION

The essay tackled the question, of whether the filter bubbles should be regulated through an opt-in or opt-out system. First, the essay compared and clarified the terms of a filter bubble and an echo chamber before defining the terms self-selective and pre-selective personalization. Then the essay discussed whether it is necessary to regulate the filter bubble at all, as there is not much empirical evidence that the phenomenon exists in the sense in which it is commonly used and discussed. Lastly, the essay argued the use of an opt-in and opt-out system regarding pre-selective personalization in social media and search engines.

An opt-in or opt-out system possesses some notable benefits for the users of social media platforms. Such a choice could make the users aware that the content is being personalized and give them better control over what information they receive. While disabling the personalization also has drawbacks, most notably in the form of making the content less engaging, its toggleable nature compensates for the disadvantages of both sides, as it

allows the user to choose the option that they prefer. The side-to-side comparison can also provide the user with valuable insight. As such, I believe that such implementation would not disadvantage the users in any way. However, such a system is not a feasible solution when it comes to search engines, as it would render the search results less relevant and the engine's function less effective.

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FEDERATED LEARNING AND DATA MINIMISATION IN AUTOMATED DECISION MAKING⁷³

ANNA MEDBØE TAMULY⁷⁴

1. INTRODUCTION

To avoid bias in automatic decisions (hereafter “ADM”), we not only need a vast amount of data, but the data we use must be meaningful. In an article in the *Hastings Law Journal*, Ignacio Cofone defines meaningful data as “counterintuitively, a data sample that is unrepresentative of the pool because it looks like what we believe the pool would look like had it not embedded structural inequalities.”⁷⁵

This requirement of meaningful collection of data is also in accordance with one of the key principles in the EU General Data Protection Regulation (hereafter “GDPR”).⁷⁶ The principle of “data minimisation” in GDPR Art. 5.1.c) states that “Personal data shall be: adequate, relevant and limited to what is necessary in relation to the purposes for which they are proces-

⁷³ Esej byla zpracována v semestru podzim 2022 v rámci předmětu MVV1368K Privacy and Personal Data Law. / The essay was written in the autumn 2022 semester for the course MVV1368K Privacy and Personal Data.

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⁷⁵ COFONE, Ignacio N. Algorithmic Discrimination Is an Information Problem. *Hastings Law Journal*. 8. 2019, vol. 70, issue no. 6. p. 1389-1444.

⁷⁶ Regulation (EU) 2016/679 of the European Parliament and the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

sed”⁷⁷. On the basis of this, it is not legal to uncritically and without limits collect a large amount of data in order to develop Artificial Intelligence (“AI”) that will carry out the processes of ADM.

However, one can argue that the need for data maximisation (big data) to avoid bias and to get good ADM contradicts the GDPR principle of data minimisation. How do we know when the data we have collected is sufficient enough to do ADM? When do we have enough data? And what is a “good and unbiased” automatic decision?

To remedy this issue and to comply with the data minimisation principle, many firms have attempted to develop AI that can perform ADM using so-called “federated learning”. This essay is going to examine if federated learning can be a solution to comply with the data minimisation principle in GDPR art. 5.1.c) when using ADM.

2. FEDERATED LEARNING: THE SOLUTION TO COMPLY WITH THE DATA MINIMISATION PRINCIPLE WHILE USING ADM?

2.1 DEFINITIONS

2.1.1 AUTOMATED DECISION-MAKING

ADM is defined in *EDPS guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679*.⁷⁸ EDPB defines ADM together with profiling as these two concepts are closely related. However, ADM alone can be understood as “the ability to make decisions by technological means without human involvement”.⁷⁹ Furthermore, they state that automated decisions “can be made with or without profiling; profiling can take place without making automated decisions. However, profiling and automated decision-making are not necessarily separate activities.”⁸⁰

⁷⁷ Ibidem, art. 5(1).

⁷⁸ EDPB. Guidelines 2016/679 on Automated individual decision-making and Profiling for the purposes of Regulation. In: *ec.europa.eu* [online]. 3. 10. 2017 [cit. 7. 11. 2022] p. 8. Available at: <https://ec.europa.eu/newsroom/article29/items/612053>

⁷⁹ Ibidem.

⁸⁰ Ibidem.

2.1.2 ARTIFICIAL INTELLIGENCE (AI) VS. MACHINE LEARNING

AI can be defined as “the field of developing computers and robots that are capable of behaving in ways that both mimic and go beyond human capabilities.”⁸¹ This means that AI can “analyze and contextualise data to provide information but also can do ADM and trigger “actions without human interference.”⁸²

Machine learning is a subcategory of AI. Machine learning is often used to create good and functional AI. In order to succeed in this, it is necessary to also use other tools besides machine learning, such as deep learning, neural networks, computer vision, and natural language processing.⁸³ Machine learning “uses algorithms to automatically learn insights and recognize patterns from data, applying that learning to make increasingly better decisions.”⁸⁴

2.1.3 FEDERATED LEARNING

Federated learning was developed by Google in 2016.⁸⁵ Google used the method to train a machine learning model on data located on mobile phones, but without uploading the data to a centralised network.⁸⁶ The purpose was to build machine learning models that were updated based on data stored on the users' mobile phones without having to share this data.⁸⁷

⁸¹ COLUMBIA UNIVERSITY, The Fu Foundation, School of Engineering and Applied Science Artificial Intelligence (AI) vs. Machine Learning. In: *ai.engineering.columbia.edu* [online]. 2022. [cit. 7. 11. 2022]. Available at: <https://ai.engineering.columbia.edu/ai-vs-machine-learning/>

⁸² Ibidem.

⁸³ Ibidem.

⁸⁴ Ibidem.

⁸⁵ MCMAHAN, Brendan, Daniel RAMAG. Federated Learning: Collaborative Machine Learning without Centralized Training Data. In: *Google Research Blog* [online]. 6. 4. 2017. [cit. 8. 11. 2022]. Available at: <https://ai.googleblog.com/2017/04/federated-learning-collaborative.html>

⁸⁶ Ibidem.

⁸⁷ Ibidem.

To train a standard machine learning model, it's required to centralise the data used in training in a data centre or on a machine.⁸⁸ Two of the Google Research Scientists explain in a Google Research blog article that federated Learning, unlike standard machine learning, “enables mobile phones to collaboratively learn a shared prediction model while keeping all the training data on the device, decoupling the ability to do machine learning from the need to store the data in the cloud.⁸⁹” They further state that this “goes beyond the use of local models that make predictions on mobile devices (...) by bringing model training to the device as well.”⁹⁰

In conclusion, federated learning is a way to minimise the use of data sharing while at the same time maximising the output. In other words, firms using federated learning will be able to train their AI to do much better ADM and, at the same time, minimise the sharing of data.

2.2 THE DEVELOPMENT AND USE OF FEDERATED LEARNING

When used by Google, federated learning works like this: a user downloads the current model of an app. The app improves by learning from the data on the user's phone. Based on the learning, the model “summarises the changes as a small focused update”.⁹¹ It is only this small focused update that will be sent back to the shared Google cloud, “using encrypted communication, where it is immediately averaged with other user updates to improve the shared model.”⁹² This means that all the personal data of a user will remain on their phone and no sharing of personal data will be done to improve the machine learning model.

An example of using federated learning to improve ADM could be when getting insurance for liability for car accidents online. Many insurance

⁸⁸ Ibidem.

⁸⁹ MCMAHAN, Brendan, Daniel RAMAG. Federated Learning: Collaborative Machine Learning without Centralized Training Data. In: *Google Research Blog* [online]. 6. 4. 2017. [cit. 8. 11. 2022]. Available at: <https://ai.googleblog.com/2017/04/federated-learning-collaborative.html>

⁹⁰ Ibidem.

⁹¹ Ibidem.

⁹² Ibidem.

providers already use ADM to give out insurance like this. However, there is a high risk of negative bias in this ADM. One of the main problems is that one insurance provider alone doesn't have enough meaningful data to make their system for ADM good enough or reliable enough. By using federated learning, they can collaborate with other insurance providers when developing the system without sharing the personal data of their customers. This will both be in line with the data minimisation principle and, at the same time, increase the scope for what ADM can be used for.

2.3 RISKS, ADVANTAGES AND DISADVANTAGES

As argued above, federated learning can lead to significant improvements in the systems that carry out ADM. This is because it is possible to gain access to much larger amounts of meaningful data without having to share the data and, therefore at the same time, operate in line with the data minimisation principle. However, there is also a great risk when using federated learning.

Often companies use cloud computing to be able to combine all the learning the system has done individually, e.g., on an individual phone in Google's case. Google uses Google Cloud and sends encrypted packages from individual phones to the shared cloud.⁹³ In this process, there are many risks. If, for example, an insurance provider does not encrypt its data in an adequate manner, they risk sharing personal data about its clients with other insurance providers. This is very problematic from a personal data point of view but can also be problematic from a competition law point of view. The definition of personal data in GDPR is broad. As soon as some of the information can be related to an “identified or identifiable natural person” either “directly or indirectly” its personal data.⁹⁴

To be able to develop the ADM process from federated learning, it is also required that the data points are the same. In other words, there must

⁹³ MCMAHAN, Brendan, Daniel RAMAG. Federated Learning: Collaborative Machine Learning without Centralized Training Data. In: *Google Research Blog* [online]. 6. 4. 2017. [cit. 8. 11. 2022]. Available at: <https://ai.googleblog.com/2017/04/federated-learning-collaborative.html>

⁹⁴ GDPR, art. 4 (1).

be predefined data categories. The Norwegian Data Protection Authority addressed this challenge in a sandbox project.⁹⁵ The project was in collaboration with a company that wanted to streamline and improve the way banks can counter money laundering and terrorist financing. However, this challenge is equally relevant for others who want to use federated learning, as shown in the example of insurance providers that want to improve their ADM when granting insurance for liability for car accidents online.

The problem arises because there are different practices related to which data is collected. In order for federated learning to work as intended, it is necessary to coordinate which data categories the banks process. If a model developed in bank A shall be trained in bank B, B needs the same data categories that A used when developing the model.⁹⁶ However the need for each category of personal data only arises when a bank builds a model which uses (and needs to use) this exact category.⁹⁷ Some categories will always be needed when issuing car insurance, while others will be necessary more rarely or maybe never in some banks. If this is the case, one can argue that it will be a breach of the data minimisation principle to collect this data to improve the ADM for the one bank that does not use this data category normally.

An opposite reflection is as follows; if, by using federated learning, it is possible to create better systems for ADM that have less bias and are more precise, could it be a breach of the data minimisation principle to not use federated learning? The result of this would have been that everyone who had the ability to use federated learning or other technologies that minimise the sharing of data when developing their ADM systems, would have had to use it.

⁹⁵ NORWEGIAN DATA PROTECTION AUTHORITY. Finterai, sluttrapport: Maskinlæring uten datadeling (English translation: Finterai, final report: Machine learning without data sharing), In: *Sandbox for responsible artificial intelligence* [online]. 11. 10. 2022 [cit. 10. 11. 2022]. Available at: <https://www.datatilsynet.no/regelverk-og-verktoy/sandkasse-for-kunstig-intelligens/ferdige-prosjekter-og-rapporter/finterai-sluttrapport/om-foderert-laring/>

⁹⁶ Ibidem.

⁹⁷ Ibidem.

3. CONCLUSION

The use of federated learning has great potential to ensure that big data can be used to make good ADM systems without breaching the principle of data minimisation. This is because the data used does not need to be shared, and the models can be trained in a bank or a phone's individual system before the learning outcome is shared with the main model.

However, there are some risks, such as how much one can trust the cloud used to share individual training and the systems used to encrypt the data.

On the other hand, Google has already successfully used federated learning for years, and with technological development, the areas in which federated learning can be used will also increase. In this essay, I have used the use of ADM when getting insurance for liability for car accidents online as an example, but there are indefinably more areas where federated learning can be used.

In order to develop good enough AI and good enough systems for ADM, large amounts of meaningful data are required. This is where the problem concerning the data minimisation principle and that the AI and ADM often get biases arises. My prediction for the future is that the more the use of AI and ADM increases, the more there is a need for federated learning and other similar technologies to make these systems good enough, that they do not have biases and, at the same time, comply with GDPR.

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[6] Regulation (EU) 2016/679, of the European Parliament and the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

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CHATGPT AS LAWYER'S ASSISTANT⁹⁸

TENA KRZNNARIC⁹⁹

1. INTRODUCTION

In the last few months, ChatGPT has caused a big storm in the public (even though it is not a barely new thing) from those who are enthusiastic about the phenomenon to those who are quick to criticize that many jobs will disappear due to artificial intelligence, including legal professionals. It didn't take long for it to be banned in Italy for violating GDPR and other similar concerns around the world. At the same time, AI successfully passed the bar exam in America. Looking at technological progress, it has great significance. This does not mean that it will take over legal affairs, but it certainly has great potential to transform it.

2. TECHNOLOGY BEHIND GPT

There are many mistakes in the media regarding names used in this matter and in any case, they are not synonyms. The first version that occurred was called GPT, which means generative pre-trained transformer. Later versions were called GPT-2, GPT-3, ChatGPT, and the most recent GPT4. In order to understand the possibilities that those models offer, it is necessary to understand the technology behind them and the differences from previous versions.

⁹⁸ Esej byla zpracována v rámci stáže autorky v Legal Institute LexRatio Institute for Legal and Information Technology in Maribor, Slovenia. / The essay was written during the author's internship in Legal Institute LexRatio Institute for Legal and Information Technology in Maribor, Slovenia.

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The first term necessary for understanding the technology behind GPT is natural language processing. Natural language processing is a branch of artificial intelligence that combines computational linguistics with statistical, machine learning and deep learning models, which enable computers to process human language in the form of text or voice data and to understand its full meaning, complete with the speaker or writer's intent and sentiment derived meaning, context, or sentiment in textual data or conversations with humans using grammars and graph structures.¹⁰⁰ GPT-3 and GPT-4 are large language models, the variation of natural language processing, capable of recognising, summarising, translating, predicting and generating text and other content based on knowledge gained from massive datasets. ChatGPT is a natural language processing tool driven by AI technology that allows you to have human-like conversations and much more with the chatbot. The language model can answer questions and assist you with tasks like composing emails, essays, and code.¹⁰¹ Simplified, ChatGPT is a chatbot driven by GPT-3 language model. The GPT-4 language model is used in another ChatGPT version, ChatGPT Plus.

When ChatGPT was asked how it can support lawyers, its answer mentioned the following categories: legal research, document drafting, case preparation, due diligence, legal writing and proofreading, legal compliance, and client communications.

As GPT is a trained model and is built on a massive dataset, ChatGPT is trained through reinforced learning which means it works based on input data, and the result can be used as input in the next analysis to improve its performance. The algorithm uses a trial and error method to come to a clear objective and can be used in natural language processing in cases such as predictive text, text summarization, question answering and machine translation.¹⁰²

¹⁰⁰ LEGAL INSTITUTE LEXRATIO. Glossary. In: *lexratio.eu* [online]. 2022 [cit. 31. 5. 2023]. Available at: <https://lexratio.eu/knowledge-base/glossary/>

¹⁰¹ *Ibidem*.

¹⁰² *Ibidem*.

Since its ‘knowledge’ depends on the inputs, its help depends on its and humans’ understanding of the term.

3. LEGAL RESEARCH

Legal research for ChatGPT is the process of identifying and analyzing legal sources and materials to find answers to specific legal questions, understand legal principles, support legal arguments, and provide guidance for legal decision-making. As a result, it can quickly search and analyze vast amounts of legal information, which gives a researcher quick access to information. It also includes case law research, statutes and regulations, legal commentary and scholarly articles. It can provide relevant legal precedents, interpretations, and insights to support legal research efforts.

A recent New York case showed that answers obtained via ChatGPT’s legal research help should be additionally verified. In the mentioned case, a lawyer used ChatGPT for case research and while asking ChatGPT to confirm if the case its answer refers to is real and to provide a source it did, though the lawyer himself did not check for the source.¹⁰³ It is yet to be seen if there will be any consequences for the lawyer and ChatGPT itself. That being said, a Texas federal judge already imposed a “Mandatory Certification Regarding Generative Artificial Intelligence.” This means all submissions to the court must have an amendment saying that they were drafted by a human or that the parts drafted using generative AI were checked by a human.¹⁰⁴

¹⁰³ DRAY, Brandon. Lawyer Faces Sanctions After Admitting Using ChatGPT For ‘Bogus’ Legal Research. In: *Daily wire* [online]. 29. 5. 2023. [cit. 31. 5. 2023]. Available at: <https://www.dailywire.com/news/lawyer-faces-sanctions-after-admitting-using-chatgpt-for-bogus-legal-research>

¹⁰⁴ COLDEWEY, David. No ChatGPT in my court: Judge orders all AI-generated content must be declared and checked. In: *techcrunch.com* [online] 31. 5. 2023. [cit. 3. 6. 2023]. Available at: https://techcrunch.com/2023/05/30/no-chatgpt-in-my-court-judge-orders-all-ai-generated-content-must-be-declared-and-checked/?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8

4. DOCUMENT DRAFTING

When it comes to document drafting, ChatGPT's answer perceives its support to lawyers as it can generate an initial draft of a document based on the user's request, such as a non-disclosure agreement or an arbitration clause. The precision of the draft depends on the question asked and the details provided.

It is important to remember that all the information that should stay private should not be inserted; as it was mentioned earlier, it is trained through reinforced learning, and it may result in a situation where such information can be used as input.

In other ways, ChatGPT can help in structuring and formatting documents, language and grammar, cross-referencing and reviewing the final version of a document.

5. CASE PREPARATION

Case preparation does not include only the legal research covered above. It can include organization and summarization of materials or suggesting case strategy. When it comes to case summarizing, it can review court opinions, pleadings etc., it can extract key information like the background of the case, legal issues of the case, key points of court reasoning and do legal analysis. In connection to the case strategy, ChatGPT can assist a lawyer in various ways, such as case theory development, by examining the evidence and formulating arguments for the desired outcome. Potentially it can provide insights into alternative dispute resolution or settlement negotiations.

6. DUE DILIGENCE

Due Diligence can be assisted by ChatGPT in many areas. To start with, it can help by reviewing documents like contracts, agreements, intellectual property etc. and analysing them to identify obligations, rights, and crucial provisions. Furthermore, it can help with risk assessment by reviewing li-

tigation history, regulatory filings and other relevant documents. It can prepare a due diligence report by summarizing previous findings.

7. LEGAL WRITING

When it comes to legal writing and proofreading, practically all the above-mentioned assistance could be conducted. But ChatGPT can also review and proofread legal documents, briefs, memos, and other written materials to help ensure clarity, coherence, and accuracy through content enhancement, citations, language and grammar checks etc.

8. LEGAL COMPLIANCE

In the matter of legal compliance, ChatGPT can help navigate through legal and regulatory frameworks by providing information on specific laws, industry standards, and compliance requirements. It can assess current compliance practices and identify gaps or areas of concern, assist in developing systems and processes for ongoing compliance monitoring and reporting and provide guidance on data privacy and security compliance.

9. CLIENT COMMUNICATION

Client communication is one of the most important parts of work, as the result of work depends on good communication. Chatbots cannot replace face-to-face communication, but they can help with simple written communication by generating clear and concise explanations of legal concepts and processes to help clients better understand their legal matters or preparing client correspondence and responses to inquiries.

10. CRITICS

The benefit of using ChatGPT is that it does not support only the English language, although it is its main working language, but many others like Croatian, Czech, German, and Spanish. Despite all the languages included, the efficiency of ChatGPT depends on the quality of input data in the requested language. The problem arising from using other languages is that it confuses similar languages. For example, it mixes Croatian and Ser-

bian. Even though it is not something worrying, it shows the importance of detailed reading and could be proven problematic when providing answers due to non-distinction data from which it learned. Not to mention, the response time in English is quicker than, for example, in Croatian.

The biggest problem that came up in legal research is that ChatGPT has up-to-date information until September 2021. This represents a huge obstacle for lawyers, especially in the continental legal circle, where legal acts constantly change. For example, Croatian Law on Renting Apartments¹⁰⁵ does not track changes from 2020, although it should be covered by the time frame.

ChatGPT itself recognizes potential challenges in using it for legal purposes. The first challenge can be a lack of contextual understanding as it generates responses based on patterns and information from the training data and may not understand the specific context or unique details of a particular legal case or jurisdiction. The second challenge is ethical and professional responsibility as humans have to verify suggested answers and information. The third problem is privacy and confidentiality. This was briefly covered above, as one has to be careful with providing data to the chatbot. Such concern occurred in Italy, which led to the ban of ChatGPT, specifically because the app had experienced a data breach involving user conversations and payment information.¹⁰⁶ The fourth challenge is the limitation in legal advice. ChatGPT can provide general legal information and suggestions, but it constantly warns that it is not a substitute for professional legal advice. Every legal case is specific, and all circumstances are essential. Layperson is not aware of the complexity and changes related to the case and can misinterpret given information or be mistaken regarding the applicable law. This especially has the effect because ChatGPT is not up-to-date after September 2021.

¹⁰⁵ Law on Renting Apartments, NN 91/96, 48/98, 66/98, 22/06, 68/18, 105/20

¹⁰⁶ MCCALLUM, Shiona. ChatGPT banned in Italy over privacy concerns. In: *BBC News* [online]. 1. 4. 2023. [cit. 31. 5. 2023]. Available at: <https://www.bbc.com/news/technology-65139406>

11. CONCLUSION

AI is a powerful tool, and the world must embrace its existence and further development. The truth is that some professions will disappear at one point in time, but new ones will surface, and legal ones are not among those.

Legal professionals do a lot of repetitive actions and similar cases that could be eased by using AI tools. It doesn't have to be ChatGPT, as there are other chatbots, too. ChatGPT is just free and easily accessible. When professionals use AI tools, they just have to be precise and careful. Professionals have to read answers in detail and check them, as potentially, they will be provided with wrong answers. They have to use their professional knowledge in order to benefit from these tools.

There are many benefits to using AI, efficiency and time-saving, accessibility and availability to continual learning, and these benefits feel both lawyers and their clients.

Yes, there are many concerns regarding the use of such technology, but we are on a long road ahead of useful regulation, which will not slow down innovation, especially in the European Union, where privacy is a top topic.

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